

VMM 1210/2820 Application Release Notes (736603)

Parker Vansco Software Product Number: 736603

Description: VMM Application Code (as described in the [VMM Embedded Software Topic](#)) for use with VMM 1210 and VMM 2820 hardware.

Version 7

Version 7.02 build 133 (September 23, 2010)

- ▶ VMM System Version 7.1.
- ▶ Supports VMM 1210 hardware (except V2.0).
- ▶ Supports VMM 2820 hardware.
- ▶ Minimum VMMS build number allowed: 700.

Changes from V7.01 build 130:

- ▶ New feature: support for optional VMMs added. It is because of this feature that the VMM System Version increased to 7.1. (Ticket #164)
- ▶ Corrected a VMM2820 analog input issue introduced in build 130 where analog input status messages are not broadcast on change, but only once a second. (Case 5875)

Version 7.01 build 130 (July 9, 2009)

- ▶ VMM System Version 7.0.
- ▶ Supports VMM 1210 hardware (except V2.0).
- ▶ Supports VMM 2820 hardware.
- ▶ Minimum VMMS build number allowed: 700.

Changes from V7.0 build 121:

- ▶ [VMM J1939 status message](#) optimization:
 - ▶ For all programmable inputs, only broadcast the primary type on change and once a second, and the rest just once a second.
 - ▶ Force status messages are only broadcast when the VMMS software is detected, or when a force of a particular type is present.
- ▶ Corrected a VMM1210 issue that could result in an output short fault being reported as an output no bus bar voltage fault (and vice versa) in VMMS diagnostics.
- ▶ Enhanced network error ([flag Fx-255](#)) detection to include the condition: master power is active, and one (or more) VMM that is defined in ladder logic is not available.
- ▶ Minimum VMMS build number enforced. Currently VMMS build 700 or higher is required.
- ▶ The VMM will accept address specific diagnostic commands from the instrument cluster J1939 address 0x17 (23).
- ▶ Supports default value configuration for [count/duration/generic logs](#).
- ▶ Corrected an issue affecting count/duration/generic logs 8, 16, 24, 32 and 48. Under certain circumstances eeprom access for these logs was not be available.

Version 7.00 build 121 (February 5, 2009)

- ▶ VMM System Version 7.0.
- ▶ Supports VMM 1210 hardware (except V2.0).
- ▶ Supports VMM 2820 hardware.

Changes from V6.0 build 116:

- ▶ VMM System Version 7.0
- ▶ [Master power](#) setting can be adjusted on a [VMM](#) by VMM basis.
- ▶ [Output](#) auto reset (OAR) can be set on an output by output basis.
- ▶ Over current value (OCV) can be set on an [output](#) by output basis.
- ▶ Short fault threshold (SFT) can be set on an [output](#) by output basis.
- ▶ Force present [flag](#) Fx-248 added.
- ▶ Increased number of [J1939 messages](#) (Rx or Tx, all sizes) supported from 20 to 60.
- ▶ Corrected an issue that under certain circumstances prevented a corrupted module [count / duration](#) / [generic log](#) from being restored using it's backup copy in [eeprom](#) resulting in the log being set to it's default value.

Version 6

Version 6.0 build 116 (August 29, 2008)

- ▶ VMM System Version 6.0.
- ▶ Supports VMM 1210 hardware (except V2.0).
- ▶ Supports VMM 2820 hardware.

Changes from V5.2 build 104:

- ▶ VMM System Version 6.0
- ▶ Provides support for upto 20 received [J1939 Diagnostic Trouble Codes](#) (DTCs) per VMM.
- ▶ Plug and play response timeout increased to support large VMM systems.

Version 5

Version 5.2 build 104 (August 18, 2007)

- ▶ VMM System Version 5.0.
- ▶ Supports VMM 1210 hardware (except V2.0).
- ▶ Supports VMM 2820 hardware.

Changes from V5.1 build 98:

- ▶ In V5.1 Build 98 there is an issue that limits the maximum output current feedback reading in ladder logic to be 6553.5 mA (6.55 A). This issue has been resolved and now the full current range on all outputs capable of reporting current is available.
- ▶ J1939 messages are no longer allowed to be processing while a rung is being evaluated. J1939 messages are only processed between successive rung evaluations.

Version 5.1 build 98 (March 17, 2006)

- ▶ VMM System Version 5.0.
- ▶ Supports VMM 1210 hardware (except V2.0).
- ▶ Supports VMM 2820 hardware.

Changes from V5.0 build 97:

- ▶ J1939 PGN Option 1 issue corrected.

Version 5.0 build 97 (March 6, 2006)

- ▶ VMM System Version 5.0.

- ▶ Supports VMM 1210 hardware (except V2.0).
- ▶ Supports VMM 2820 hardware.

Changes from V4.6 build 88:

- ▶ Analog input state reported in PGN 0xFF13 instead of 0xFF10.
- ▶ Frequency input state reported in PGN 0xFF82 instead of 0xFF80.
- ▶ Interfaces with [VMM 0604](#) and [VMM 2404](#).
- ▶ [Plug and play](#) enhanced to support more than one application families.
- ▶ Setting a VMM 1210 programmable inputs to one type no longer prevents that input from being available as the other types. However, setting a programmable input to one type vs another may have functional consequences when trying to use the same input as any of the other two types, refer to the [programmable input topic](#) for details.
- ▶ Ladder logic flash allocation increased from 128 KB to 192 KB.
- ▶ [Output](#) short fault threshold added.

Version 4

Version 4.6 build 88 (December 22, 2005)

- ▶ Supports VMM 1210 hardware (except V2.0).
- ▶ Supports VMM 2820 hardware.

Changes from V4.5 build 82:

- ▶ [J1939 table](#) PGN option(s) added
 - ▶ Option 1: if transmitted, transmit only when at least one parameter is active.
- ▶ Output current feedback available as an [analog input](#) 71...
 - ▶ VMM 1210: outputs 1 to 8 as 71 to 78
 - ▶ VMM 2820: outputs 1 to 18 as 71 to 88
- ▶ If an output shorts more than 10 times, it is permanently latched off. A latched off output will report short circuit fault.

Version 4.5 build 82 (August 22, 2005)

- ▶ Supports VMM 1210 hardware (except V2.0).
- ▶ Supports VMM 2820 hardware.

Changes from V4.4 build 72:

- ▶ LED Override [Flag](#) added.
- ▶ [CAN Message](#) parameter supported.
 - ▶ If a J1939 message is defined with a source address other than a [VMM source address](#), that source address is also claimed.
 - ▶ A max of 10 additional source addresses may be claimed by each VMM 1210 / 2820.
 - ▶ Large messages are supported only by the [VMM source address](#).
 - ▶ Per module, a maximum of 100 message parameters ([J1939](#) SPNs or [CAN Messages](#) Mx-y) may be transmitted and or received contained within a maximum of 20 messages (PGN/CAN) with a maximum of 32 parameters per message.
 - ▶ If a module is not able to claim an address, the power led will flash.
- ▶ VMM proprietary PGNs may be transmitted and received for ladder logic processing provided a source address other than a [VMM source address](#) is used. If an attempt is made to transmit or receive a VMM proprietary PGN using a VMM sources address in ladder logic, a J1939 table not understood error will result.

Version 4.4 build 72 (February 21, 2005)

- ▶ Supports VMM 1210 hardware (except V2.0).
- ▶ Supports VMM 2820 hardware.

Changes from V4.3 build 60:

- ▶ Extended Memory Flags from 2 to 32.
- ▶ Extended Logs from 8 to 48.

Version 4.3 build 60 (May 28, 2004)

- ▶ Supports VMM 1210 hardware (except V2.0).
- ▶ Supports VMM 2820 hardware.

Changes from V4.2 build 54:

- ▶ Output over current detection improvement:
 - ▶ V4.2 triggers an over current fault after an over current condition has been present for 1 second continuously (i.e. if an output is not on for at least 1 second, an over current fault will never be detected). V4.3 also requires an over current fault condition to be present for 1 second, but does not require it to be 1 continuous second. Instead V4.3 accumulates time when an over current fault is detected, and will delete any accumulated time when the fault is not present at a rate of 1 to 10.
 - ▶ An output auto reset fault time of less than 10 seconds will be set automatically to 10 seconds. On the VMM1210 you can still disable the auto reset fault feature all together.
- ▶ Adjustable analog sampling:
 - ▶ In V4.2 analog values are based on a running average of the most recent 16 samples (40 Hz sampling rate). V4.3 allows you to change the number of samples used (default is 16). V4.3 VMM PC software (or higher) is required to generate a ladder logic file that can change number of analog samples from 16.

Version 4.2 build 54 (February 4, 2004)

- ▶ Supports VMM 1210 hardware (except V2.0).
- ▶ Supports VMM 2820 hardware.

Changes from V4.1 build 38:

- ▶ Support for the remaining timer time feature added to the [diagnostic status screen](#) in build 431 of the VMM Software.
- ▶ Internal temperature [analog input](#) Ax-254 added to VMM1210 (V2.2 hardware or newer required).
- ▶ Internal output bus bar voltages added to VMM1210 (V2.4 hardware or newer required). Bus bar 1 is [analog input](#) Ax-252, and bus bar 2 is [analog input](#) Ax-253.
- ▶ Two additional special flags added: Fx-250 "BUS1 OUT OFF" and Fx-251 "BUS2 OUT OFF". See [flag symbol](#) topic for complete details.
- ▶ [Frequency types](#) added allow frequency inputs to be defined as frequency (Hz), counter (# edges), or quadrature (#edges including direction) input types..
- ▶ Additions to the [Ladder Logic File Properties](#) screen (Requires build 437 or newer VMM Software):
 - ▶ Module Security - option to require a valid product key in order to be able to perform various diagnostic functions with a VMM.
- ▶ [Count / duration / generic logs](#) have a default value of 214748364.7.

Version 4.1 build 38 (June 20, 2003)

- ▶ Supports V2.1 and V2.2 VMM 1210 hardware.

- ▶ Supports VMM 2820 hardware.

Changes from V4.1 build 34:

- ▶ Support for the 'Telltale State Source' setting added to the [ladder logic file properties screen](#) in build 428 of the VMM Software.
- ▶ Duty cycle determined from an arithmetic result is internally limited to a range of 0 to 100.
- ▶ Fixed issues introduced in build 34:
 - ▶ With VMM 1210, V2.1 hardware, input 6 was always off.
 - ▶ Analog inputs on the VMM 2820 disabled.

Version 4.1 build 34 (May 9, 2003)

- ▶ Supports V2.1 and V2.2 VMM 1210 hardware.
- ▶ Supports VMM 2820 hardware.

Changes from V4.0 build 29:

- ▶ Plug and play will now program multiple blank modules, provided there are two groups of modules: blank modules, and programmed module (all programmed with the same software). See [plug and play topic](#) for details.
- ▶ Fixed issue that would cause the leds on a VMM 1210 to flicker on power down.
- ▶ Max count or duration log value increased from 65535 to 214748364.
- ▶ Fixed the issue that caused the setting of the attenuation of input 11 to erase the most significant bit of gain for input 10.
- ▶ [Generic log](#) type added in addition to count and duration log symbol types available for use in ladder logic.
- ▶ [Math symbol](#) enhancements: increment, decrement and stopwatch actions.
- ▶ [Memory flags](#) maintain their last known state, instead of resetting to 0 when their rung becomes inactive.
- ▶ Fixed issue related to initializing output 2 on a VMM 2820.
- ▶ Fixed issue that prevented a VMM 2820 from being able to use a frequency input from a VMM 1210, as an input.

Version 4.0 build 29 (March 4, 2003)

- ▶ Supports V2.1 VMM 1210 hardware.
- ▶ Supports VMM 2820 hardware.
- ▶ Fx-252, soft power control flag added. See [flag symbol](#) and [special flags examples](#) for details, and examples.

Version 3

Version 3.2 build 31 (May 9, 2003)

- ▶ Supports only VMM 2820 hardware.

Changes from V3.0 build 8:

- ▶ Corrects problems with EEPROM writing if input 5 is used as a power control (when input 5 is the only power control input active).
- ▶ Corrects problems with EEPROM and possible module resets due to EEPROM writing to bad locations.
- ▶ Improved plug and play to prevent the copying of hardware rev and serial number data during the plug and play programming.
- ▶ Improved plug and play to allow the VMMs to complete the process on their own. The VMMs now

automatically reset and begins functioning after completion of plug and play. Eliminates the need to manually reset the system after plug and play is performed.

- ▶ Improved ladder logic processing such that rungs activated by all NOT'd symbols no longer require another symbol that is not NOT'd to prevent brief turn on at power up.
- ▶ Improved ladder logic processing to allow telltales to be used as inputs in all system modules rather than just the module driving the telltales.

Version 3.0 build 8 (March 13, 2002)

- ▶ Supports only VMM 2820 hardware.