Brüel & Kjær Vibro
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Release Notes

VC-8000 Machinery Protection System

MPS 2021

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Release Notes **VC-8000 Machinery Protection System MPS 2021**, S1088790.002 / V05, en,
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Brüel & Kjær Vibro GmbH
Leydheckerstrasse. 10
64293 Darmstadt
Germany

Phone: +49 6151 428 0
Fax: +49 6151 428 1000

Brüel & Kjær Vibro A/S
Lyngby Hovedgade 94, 5 sal
2800 Lyngby
Denmark

Phone: +45 69 89 03 00
Fax: +45 69 89 03 01

BK Vibro America Inc.
1100 Mark Circle
Gardnerville NV 89410
USA

Phone: +1 (775) 552 3110

Hotline

Phone: +49 6151 428 1400
E-Mail: support@bkvibro.com

Homepage

www.bkvibro.com

Corporate E-Mail

info@bkvibro.com

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1 MPS 2021

1.1 UMM Firmware *(v1: 7.07.9009; v2: 7.07.9009)*

The following enhancements have been made to UMM firmware:

- (New) Support for multi-state hardware alarming
- (New) Support for non-linear velocity sensors
- (Recommended for all users) Resolved bypass issue with Discrete Input channels used as contacts.

1.2 TMM Firmware *(v1: 7.01.9012; v2: 7.01.9014)*

- No enhancements.

1.3 SAM Firmware *(7.07.9008)*

The following enhancements have been made to SAM firmware:

- (New) Support for multi-state hardware alarming
- (New) Support for Modbus import/export features to support state measurements and setpoints
- (Recommended for users with a SAM in slot 3) Resolved issue that would result in the SAM in slot 3 losing communication with the rack and no longer sending data out over MODBUS.

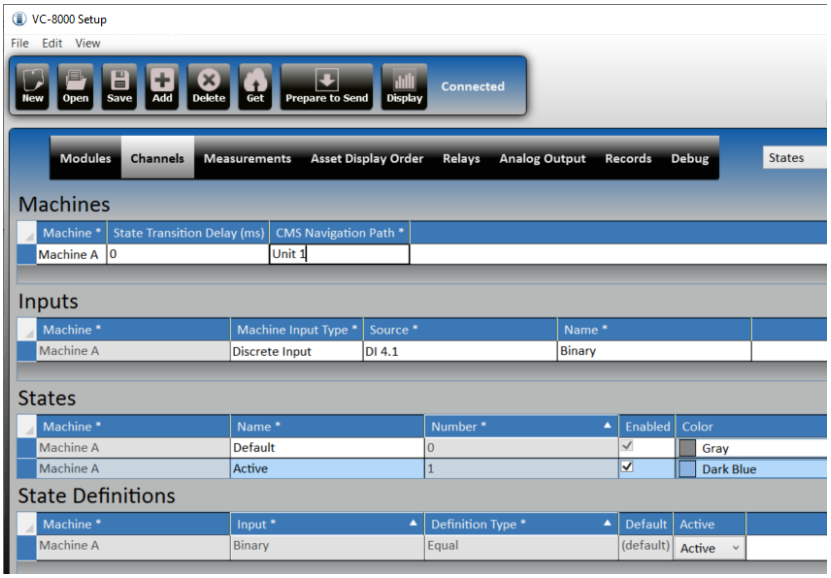
1.4 MPS Software *(7.07.356 EN, 7.07.355 RU)*

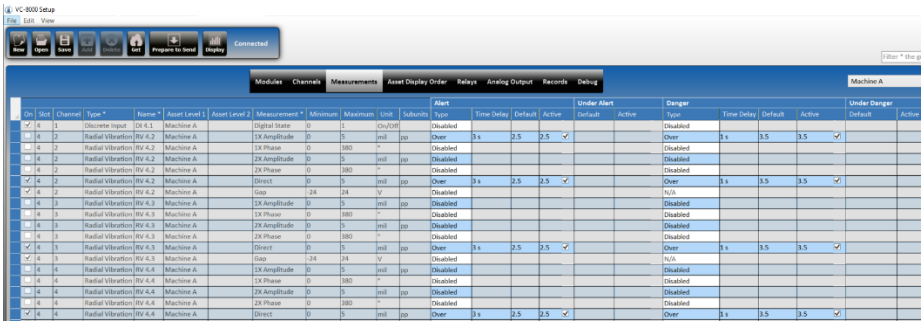
The following enhancements have been made to MPS software:

- (New) Support for multi-state hardware alarming

  This release introduces multi-state hardware alarming. The definition of each machine state is defined in the MPS software in the Channels-States view. VC-8000 can support up to 32 machines and each machine can have up to 15 unique, user-defined states. A machine state can be defined by the criteria of Discrete Input channels, Phase Trigger speed ranges or direction of change of speed. Each machine state can be configured with alarming criteria.

  Support for states in CMS will be available in versions greater than 7.6.





- (Recommended for all users) The default settings for Hydro RV nX amplitude measurements are Disabled.
- (Recommended for all users) Resolved speed reporting for tachometer with events-per-rev configuration.
- (Recommended for all users) Resolved inconsistency with showing redundant SAM in MPS rack display.
- (Recommended for all users) Resolved Properties view configuration for Recip Impact measurements.
- (Recommended for all users) Prevent the Front Panel display from going into sleep mode.
- (Recommended for all users) Resolved Asset Level issues in the Asset Display Order view.
- (Recommended for all users) Resolved missing/invalid Phase Trigger associations in legacy configurations.

- (Recommended for all users) Resolved issue of downloading custom Modbus maps to redundant SAMs.
- (Recommended for all users) Added password validation when HD is enabled to allow remote connection.
- (Recommended for all users) Enhanced the display for the Discrete Input channel.
- (Recommended for all users) Corrected the Discrete Input channel units in Customize Transducer View.
- (Recommended for all users) Added validation for paired channels and CMS Navigation path.
- (Recommended for all users) Updated product link in MPS updates screen.
- (Recommended for all users) Updated group line validations for relay logic with the machine state features.
- (Recommended for all users) Updated help screens for XY pair relay logic.
- (Recommended for all users) Resolved issue with XY pairing of unrelated channel types in relay logic.
- (Recommended for all users) Resolved issue with MPS Remote connection.
- (Recommended for all users) Enhanced config send process to ensure rack wide config synchronization.

2 MPS 2019 SP1

2.1 UMM Firmware *(v1: 7.03.9013; v2: 7.03.9013)*

The following enhancements have been made to UMM firmware:

- (New) Support for the Max X/Y measurement for Velocity, Acceleration and RV channels.

2.2 TMM Firmware *(v1: 7.01.9012; v2: 7.01.9014)*

- No enhancements.

2.3 SAM Firmware *(7.03.9019)*

The following enhancements have been made to SAM firmware:

- (New) Support for the Max X/Y measurement for Velocity, Acceleration and RV channels.

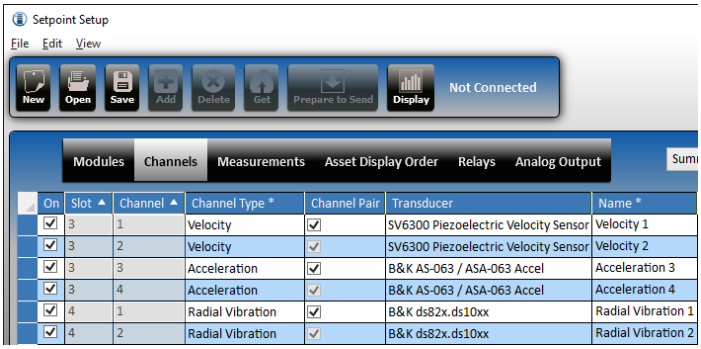
2.4 MPS Software *(7.03.52 EN, 7.03.53 RU)*

The following enhancements have been made to MPS software:

- (New) Explicit X/Y Channel Pairs for Acceleration, Velocity, and Radial Vibration channels.

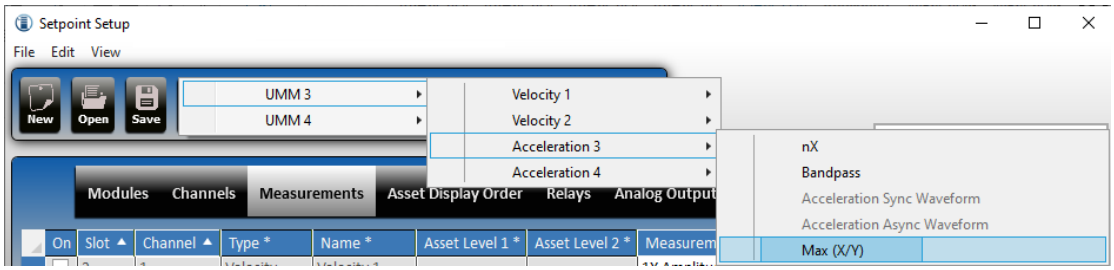
  This release introduces a new Channel Pairing feature that provides support for explicit channel pairs allowing the ability to pair the channel types: Radial Vibration, Diagnostics Proximity, Velocity, Diagnostics Velocity, Acceleration & Diagnostics Acceleration. The explicit pairing is provided through a new Channel Pair column in the Channels-Summary view in MPS. Channels 1,2 & 3,4 can be paired.

  Explicit pairs for Velocity and Acceleration and any other pair not otherwise having matching Phase Triggers will not produce orbits in CMS. Support for orbits in CMS will be provided for these scenarios in future releases for versions greater than 7.5.



- (New) Max X/Y measurement for Acceleration, Velocity and Radial Vibration channel pairs.

  This release introduces a new Max X/Y measurement. This measurement is a dual channel measurement that reports the maximum value from the two possible input channels. This measurement can drive a 4-20mA output and is reported via MODBUS. The Max X/Y is an addable measurement. For any channel pairs that exists, channels 1 or 3 may be used from this pair to add the addable Max X/Y measurement to the channel. The measurement will report the maximum value from the two paired channels.



- (Recommended for all users) Resolve failures when configuring Recip Impact properties.
- (Recommended for all users) Resolve formatting issues with the CMS Navigation Path.
- (Recommended for all users) Resolve missing module names in rack displays.
- (Recommended for all users) Resolve situation where HD is enabled without a view password.
- (Recommended for all users) Resolve failures with duplicate Asset Display Order entries.
- (Recommended for all users) Resolve missing Asset Display Order entries.
- (Recommended for all users) Resolve incorrect default Hydro RV alarm type defaults.
- (Recommended for all users) Prevent the Front Panel display from going into sleep mode.
- (Recommended for all users) Prevent locking the screen when progress dialogs are visible.
- (Recommended for all users) Prevent invalid configurations for Analog Output measurements.
- (Recommended for all users) Improve Tachometer stability for multiple EPR at high frequency.

NOTE!

Rv with Smax must be added to channels 1,2 or 3,4. Attempts to add this channel type in any other configuration may produce unexpected results and should be avoided.

3 MPS 2019

3.1 UMM Firmware *(v1: 7.01.9068; v2: 7.01.9064)*

The following enhancements have been made to UMM firmware:

- (New) Support for waveforms up to 32,768 samples.

3.2 TMM Firmware *(v1: 7.01.9012; v2: 7.01.9014)*

- No enhancements.

3.3 SAM Firmware *(7.01.9064)*

The following enhancements have been made to SAM firmware:

- (New) Support for waveforms up to 32,768 samples.
- (Recommended for all users) Performance improvements to prevent loss of condition monitoring data when using fully loaded racks.
- (Recommended for all flight recorder users) resolve defect with CMS client connection retrieving data from SD instead of HD.
- (Recommended for all ESAM users) Resolve issue with display not connecting to rack.

3.4 MPS Software *(7.0.791 EN, 7.0.792 RU)*

The following enhancements have been made to MPS software:

- (New) Support for waveforms up to 32,768 samples.
- (New) Phase measurements available for hydro radial vibration and hydro velocity channels.
- (Recommended for all users) Resolve various issues with configuration send failing.
- (Recommended for all users) Resolve failures while applying rack capabilities upgrade key.
- (Recommended for all users) Resolve software crash when editing channel properties.
- Allow m/s^2 for peak stretch measurements.

4 MPS 2018 SP1

This release resolves key customer defects and enhancements.

4.1 Setup And Maintenance Software *(6.50.48 EN, 6.50.49 RU)*

The following changes have been made for this release:

- Support for 4 channels of hydro radial vibration, and hydro velocity on a given monitor.
- Remove 1000 Hz limitation when events per revolution is not 1.
- 512 or 1024 samples per revolution for reciprocating applications.
- Support orbits for hydro radial vibration channels.
- Fix to support all necessary units for air gap channels.
- Fix to allow mix of single and double acting cylinders for reciprocating compressors channels.

4.2 UMM Firmware *(6.50.9012)*

The following changes have been made for this release:

- Support orbits for hydro radial vibration channels.
- Better filtering for DC noise at low RPM for SMAX measurements.
- Fix for configuration changes and firmware upgrades not always persisting in flash.

4.3 TMM Firmware *(6.50.9005)*

The following changes have been made for this release:

- Fix for configuration changes and firmware upgrades not always persisting in flash.

4.4 SAM Firmware *(6.50.9003)*

The following changes have been made for this release:

- Resolve issues with remote configuration changes not updating clients.
- Prevent spurious front panel display reboots while configuration is being changed.

5 MPS 2018

5.1 MPS Remote Access

Remote Access allows MPS clients to connect to a Setpoint MPS rack over the Ethernet. In order to successfully connect the rack has to be ordered with MPS remote access, have an administration password, and have remote MPS access enabled.

Two levels of access are available to the rack: Administrator, and Remote User Access. Each account has its own password. If a password is blank the account is disabled and users are given a warning when sending a configuration change to the rack.

When connected via Remove User Access the user is unable to remotely send configurations, update firmware, enable channel bypass, reboot the SAM, enable hardware features, or set time. They can acknowledge events, and force boost data collection. NOTE: Remote User Access account will also be used to provide CMS client access to HD data.

When connected with the Administrator account the user may access all capabilities of the setup and maintenance software except for enabling hardware features.

When connecting to a previously used rack the rack name is presented in addition to the IP address.

Connections are made through the Setup application's file menu. Recently used connections are listed with the rack name to allow for easy re-connection to racks.

When connected to a rack the rack name is displayed on the screen for reference.

A capability on the info screen should identify SAM modules that are capable or enabled for remote access.

TCP Port 8004 provides remote MPS access.

Window Communication Foundation (WCF) is used to provide transport security and windows authentication. This is suitable for an intranet environment.

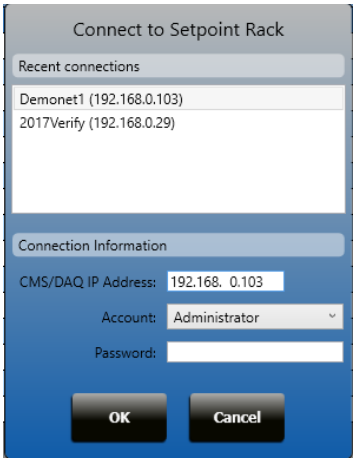


Figure 5-1) Remote Access Connection Dialog

5.2 Bypass Votes True

Channel Boolean logic blocks now allow bypass to vote true. This allows bypassed channels to be removed from logic, such that and logic may still vote true.

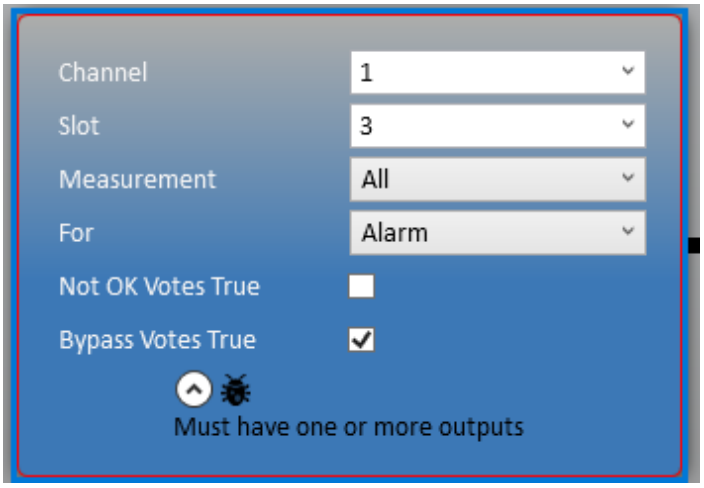


Figure 5-2) Bypass Votes True

5.3 Rack Information

CMS, HD, and SD statuses have pop up displays with additional information about each status including remaining storage capacity, network bandwidth, and more.

5.4 MPS Large Value Display

The rack front panel display has been enhanced to show large values that can be seen from a greater distance from the rack. This allows replacement of external tachometer displays for some customers.

5.5 Air Gap Channel

Air gap monitoring is now available refer to the hydro Solutions manual (S000004001) for more information.

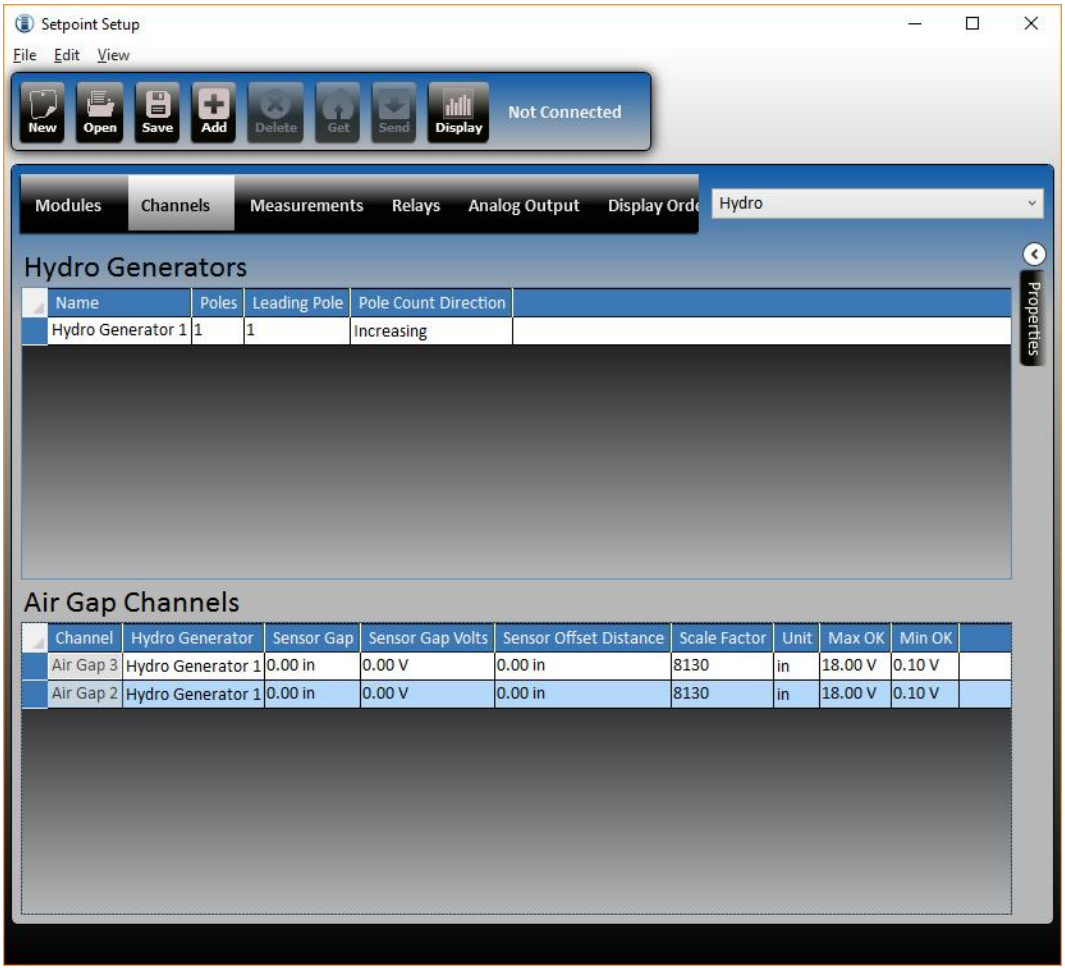


Figure 5-3) Air Gap Configuration

5.6 Defects and Enhancements

The following defect fixes and enhances have been made for MPS:

- A new channel (Tracking REB Acceleration) may provide REB fault frequency measurements
- A new channel that can provide SMAX measurements
- A list of 3 diagnostic channels optimized for portable data collection have been added to MPS
- Adaptive Iness has been fixed to properly handle various error conditions that can drive excessive data collection.
- MPS setup can save a configuration as a simulator file.
- Issue with hardware info screen not always loading has been fixed
- Ability to remove a channel from a collection group
- No Pulses, and Triggering error statuses are now displayed on the front panel display
- CMS File may be replayed as a simulator to drive realistic data into a PI System for demonstration and test purposes
- Dynamic Collection Percent threshold is now used as minimum threshold when using adaptive Iness
- V2.50 SAM could not be configured with previous release, but may now be configured
- Some Voltage values were not showing on pop up display

Contact

Brüel & Kjær Vibro GmbH
Leydheckerstrasse 10
64293 Darmstadt
Germany

Phone: +49 6151 428 0
Fax: +49 6151 428 1000

Brüel & Kjær Vibro A/S
Lyngby Hovedgade 94, 5 sal
2800 Lyngby
Denmark

Phone: +45 69 89 03 00
Fax: +45 69 89 03 01

BK Vibro America Inc.
1100 Mark Circle
Gardnerville NV 89410
USA

Phone: +1 (775) 552 3110

Corporate E-Mail: info@bkvibro.com

Homepage: www.bkvibro.com

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