

PRODUCT RELEASE NOTES

Product: Ponemah™ Physiology Platform
Model: Ponemah
Version: 5.40
Build: 013918-001
Date: November 2019

Product Release Notes for Ponemah Physiology Platform version 5.40 indicate revisions made to the Ponemah core application and analysis modules since version 5.32. For information regarding changes to the software from previous versions, please refer to the Release Notes folder located on install key.

Compatibility

Ponemah v5.40 is compatible with the 64-bit version Windows 10 version 1607 and later. It is also compatible with the 64-bit version of Microsoft Office 2007 or greater.

Note: Microsoft .NET framework 4.7.2 required.

New features, enhancements, and fixes

Installation

Reference #	Description	Disposition
43187	Fix added for CLC hardware configuration opening instead of MX2 hardware configuration after upgrading from a previous version whose hardware configuration was set to MX2.	Fix
43325	Added missing Windows 10 firewall rules to the install required for telemetry acquisition and network study.	Fix
45926	The Ponemah uninstall for Ponemah v5.32 removes all files during the uninstallation process, including any native file that was customized; i.e. PPP3.INI or SEND.XML. This has been corrected with Ponemah v5.40 to preserve modified files.	Fix

Ponemah Core

Reference #	Description	Disposition
26412	Added ability for the RAW file to automatically increment based on file size or data acquisition time.	Enhancement
42568	Data Reduction User defined T0 time may be modified during an acquisition.	Enhancement
42952	Fixed Data Parser Setup dialog to display Sub-Divide Span fields and associated scroll bars when using Japanese Operating System.	Fix
43006	Added support for up to 32 groups/subjects across all acquisition types.	Enhancement
43010	Added EEG analysis module to provide appropriate labeling when the Auto Configure Protocol feature is used for proper translation to NeuroScore for data analysis. Note: This is licensed with the EMG analysis module.	New
43027	Removed Ponemah's Demo mode; i.e. the ability to launch the application without the licensing dongle.	N/A
43222	Added the ability for the Data Storage Scheduler to pause Primary Graphs, Trend Graphs, and Derived Data list views during acquisition periods of inactive RAW data storage.	Enhancement
43352	Shared Windows drives or Mapped drives may now be accessed from various Ponemah Browse to dialogs; e.g. Data Manager, Open Protocol, Open Review, etc.	Enhancement
43471	When using Auto Configure Protocol with PhysioTel Digital implants, the Group Name will be updated with the implant name defined in CLC configuration.	Fix
43732	Updated the maximum allowed aggregate sample rate from 100,000 Hz to 150,000 Hz to account for Ponemah's available 256 acquisition channels.	Enhancement
43923	Fixed Data Storage Scheduler time, duration and interval fields to allow users the ability to configure the scheduler. This also fixed Scatter and XY-Loop graphs' Start/End Offset time fields, as well as Digital Display Timer setup which were impacted by this issue.	Fix
43964	Added analysis and calibration support for DSI's Continuous Glucose implants. Also added glucose support for Dataquest ART data import process.	New

44136	Fixed black graph page background not persisting from protocol setup to acquisition and review.	Fix
44172	Fixed Auto Configure Protocol to update Protocol Setup appropriately when channels are excluded using channel mapping.	Fix
44284	Fix added to prevent Ponemah from shutting down when attempting to Replay a RAW file that does not contain a Jump table.	Fix
44292	If an illegal change to the PC clock is detected, a new license file can be loaded as long as the license file time matches the clock time - i.e. the clock must be fixed.	Fix
44410	Added the ability to combining multiple (>2) RAW files into a single file. Also permits the ability to define specific signal types to combine.	Enhancement
44472	Fix added for unexpected shutdown when attempting to edit multiple channels from Graph Setup using multiple select actions.	Fix
44522	Group selection within the Group Event List View will now persist to subsequent acquisitions when saving the protocol upon stopping acquisition.	Fix
44827	"Dose2" is no longer appended to the Data Reduction interval label during Acquisition when a single event is entered.	Fix
44835	Added Transport Layer Security (TLS) compatibility for Remote Notification to permit transmission of data over an encrypted channel.	Enhancement
44862	Fixed issue where Data Reduction list views would display for change from or % change from values as 'inf' instead of 'x' when Max, Min, or Avg values were unknown or 'x'. Now, these values will also display an 'x' value.	Fix
44932	Fix added to prevent Ponemah from occasionally shutting down unexpectedly when acquiring URP data.	Fix
45170	The number of configurable graph pages have been restricted to 8 during acquisition to fix slow performance when acquiring from greater than 26 subjects/groups.	Fix
45183	Added the ability for users to create their own derived parameters based on existing derived parameters and marks for reporting in Derivation and Data Reduction list views.	New
45715	Fix added to prevent Control Events initiating Monitoring Intervals during acquisition when Control and T0 events are defined as different events.	Fix

45979	Fix added to prevent signal corruption (i.e. data spikes) when the printing RAW data to XPS file during acquisition.	Fix
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MX2 Acquisition Interface

Reference #	Description	Disposition
45115	Disabling an HD implant's Battery ON Time channel no longer prevents the Implant Status Battery Status from being updated.	Fix
45212 45213	Fixed Ponemah occasionally shutting down unexpected while attempting to start or stop acquisition from MX2.	Fix
45357	A timeout was added to Diagnostic webpage loading process which checks for cached copies of webpage to prevent the potential of system becoming unresponsive.	Fix
45453	Added support for DSI Signal Interface.	New

CLC Acquisition Interface

Reference #	Description	Disposition
45357	A timeout was added to Diagnostic webpage loading process which checks for cached copies of webpage to prevent the potential of system becoming unresponsive.	Fix
45597	The default PhysioTel Digital biopotential range gain setting has been updated from +/- 10mV to 14mV.	Fix
45599	PhysioTel Digital Battery Voltage channels can now sample at any available sample rate. Battery Voltage channel is no longer hidden from PhysioTel Digital Configuration Implants Details channel list.	Enhancement

JET Acquisition Interface

Reference #	Description	Disposition
43194	Added the ability for Ponemah to automatically reset JET BT Receivers when the device loses its IP connection. All disconnects and reconnects are logged in the JET debug log.	Enhancement

ACQ-7700 Acquisition Interface

Reference #	Description	Disposition
44424	Fixed an occasional locked cell in the ACQ-7700 Amplifier Setup dialog which would prevent users from augmenting selection.	Fix
44911	Fixed an unexpected shutdown of Ponemah which was caused by changing an ACQ-7700 channel label and would occur upon stopping acquisition.	Fix

Review

Reference #	Description	Disposition
41762	Added ability for a linear regression line to be displayed on the scatter graph with its slope and y-intercept values.	Enhancement
43167	Added ability to perform the Holzgreffe method for QT correction within the scatter graph by permitting user defined binning of results and presenting binned results using a log scale.	Enhancement
43328	Added Data Cleaning function to permit definition of data exclusions criteria used to remove cycle or average derived data from Derivation and Data Reduction list views.	New
43743	Fixed incidence of data parser segments not appearing in Review when opening a dataset originally acquired in Ponemah v5.20, but never opened and saved using Ponemah v5.20 Review.	Fix
43806	Fixed Data Reduction refresh issue where deleting the last Parser Segment would not update Data Reduction table. Workaround: Moving the T0 event (i.e. event A) would refresh the Data Reduction table.	Fix
44029	Data Reduction title bar no longer flashes nor displays a large negative progress indicator when loading data into Review with large Data Reduction intervals.	Fix
44099	Trend graphs would not display results when the logging rate interval started within bad data marks.	Fix
44369	Made channels greater than 128 available for ASCII output from Review.	Fix

44492	Fixed issue where saving derived data from Parser View Mode would result in an Excel file with small differences in derived output values between the Excel output and what was displayed in the Ponemah Derived List View.	Fix
44576	List View screen positions will now be retained after saving the protocol.	Fix
44846	If no cycles are present NPMN type parameters will still be reported if logging by time.	Fix
44925	The Freeform Note title now reflects the correct channel number associated with the note.	Fix
44926	Added ability to use Freeform Notes to mark and annotate arrhythmias based on a list of arrhythmia types previously defined within the SEND Controlled Terminology Manager.	Enhancement
45946	Scatter graphs would not display results when the logging rate interval started within bad data marks.	Fix
45509	A change was made in the Review sample cache to accommodate non-numeric values (NaNs) present in the data stream. This results in extremely small changes to sample values – below the level of noise. However, these small changes can result in slight differences in Presentation signal calculation, Mark placement and derived parameter calculations as compared to earlier Ponemah versions.	N/A

Analysis Modules

Reference #	Module	Description	Disposition
42813	URP	In earlier versions, MV and MVadj were calculated as an average of beat by beat TV and BPM values when running in a multiple epoch logging rate or time-based logging rate. They are now calculated using the average TV and BPM values for that logged line.	Fix
42193	BP/PAP	Added Pulmonary Arterial Pressure (PAP) analysis module to permit differentiation between blood pressure types with regard to SEND domain designation.	New
43300	dEMG	Improved analysis performance of the dEMG analysis module when using ECG signal to remove artifact.	Fix
43573	RAW, ACT, TEMP, BARO, BP	Fix added to no longer report values to the Derived List Views for TA and NPMN parameters across Bad Data Marks.	Fix

43729	URP	Fixed Ponemah occasionally becoming unresponsive when analyzing data with the URP analysis module.	Fix
44100	PVO	The PVO analysis module no longer marks negative impedance signal values with bad data marks when Rail detection is disabled from the Noise tab.	Fix
44103	PVO	PVO Minimum Volume attribute will now update to reflect effect of calibration.	Fix
44144	PVO	Fix added to ensure manually entered PVO cycles report derived data to the Derived and Data Reduction List Views.	Fix
44170	ECG	Fixed ECG analysis while in Parser View Mode only analyzing data within the first Parser Segment. All segments are now analyzed.	Fix
44356	LVP	No longer report NPMN data across bad data marks.	Fix
44523	URP	Stopped Ponemah from shutting down unexpectedly when reanalyzing data with the URP analysis module.	Fix
44852	RAW, ACT, TEMP, BARO, ECG, PAF, URP, PVO, PCR, dEMG	Fix added to calculate and properly display Data Reduction percent change, percent delta, and delta derived data when control and the corresponding Avg, Ln, Max, Min values are available. Derived Parameters impacted: <ul style="list-style-type: none"> • RAW, ACT, TEMP, BARO - NPMN, TA • ECG - QTcb, QTcf, QTcv • PAF, URP, PVO, PCR, dEMG - MV 	Fix
44864	PAF, PCR, PVO, ECG	Derived data reliant on derived data from prior cycles from the current or another channel is no longer intermittently reported as unknown; i.e. 'x'. Derived Parameters impacted: <ul style="list-style-type: none"> • PAF, PCR, PVO - AVol • ECG - Multilead parameters 	Fix
44924	BP/PAP	Added a derivative based noise filter to the BP analysis module allowing users to eliminate data impacted by artifacts that have a rapid rate of change relative to the pressure signal.	Enhancement

ECG PRO

Reference #	Description	Disposition
43853	Fix added to prevent "Invalid Format" and "Not Authenticated" messages from being displayed in the Template Setup dialog when loading an empty template library created using previous version of Ponemah. These messages may have occurred after adding cycles to this empty template library, saving the updated library, and then closing and reopening Review.	Fix

Data Insights

Reference #	Description	Disposition
42916	Added ability to report on small Data Insights Histogram bins. Now, data may be reported over the small bin duration despite the Histogram display being unable to present the data within the dialog.	Enhancement
42914	Added ability to report and display Data Insights match results with time alignment from dose (Data Reduction T0 event).	Enhancement
42915	Added a Date/Time rejected column to the Data Insights Rejected Results list view to more easily find and correct inadvertently rejected results.	Enhancement
43986	Fixed an unexpected shutdown of Ponemah when switching to Parser View Mode while Data Insights is calculating match results.	Fix
43987	Fix added to not display Data Insights match results from outside of Parser Segments when in Parser View Mode.	Fix

Study Protocol

Reference #	Description	Disposition
32725	If a Study spans Daylight Savings Time, Study Day dates after the Daylight Savings changeover were off by a day. These dates are now correct.	Fix
44157	Reduced the time required to load the Manage Studies dialog.	Fix
45208	Fixed an infinite loop between two dialogs encountered from the Run Study dialog Edit Hardware Configuration when Save and Exit from the MX2 interface was selected.	Fix

46074	Fixed Ponemah's ability to find and acquire video data from cameras when using a Protocol file configured with Noldus Media Recorder in Study.	Fix
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Data Security Option

Reference #	Description	Disposition
42622	Removed Public Key Export from the list of Permitted Features.	Fix
42956	The OpenART access levels Edit DSI Setup and Select DSI Sources dialogs were removed from Access Level Setup since OpenART support ended in Ponemah v5.20.	Fix
43213	The Ponemah Admin application User List Setup dialog Delete button is now set to a disabled state when a Username is not selected.	Fix
43265	When the system is Secured, users would be inconsistently prompted with the Reason dialog when making changes to the Protocol file Setup when in Idle mode. This has been suppressed to no longer prompt for a Reason when making changes to setup, before data is collected.	Fix
43290	Fix added to prevent users from being able to Sign files from the Ponemah Tools menu when the Sign Files feature was on the Restricted list for that user's access level.	Fix
43294	Fixed the Data Security Verification printout to display properties on separate lines to prevent descriptions from being truncated off the page.	Fix
43726	Fixed the ability to switch users on a Secured system when disconnected from the network domain.	Fix
43741	Removed the ODBC Interface from the available features list within the DSO Access Level Setup. Also, updated the Select APR1 feature name to Select Ambient Reference to account for APR-2.	Enhancement
44324	Fixed intermittent issue where logging into a secured Ponemah workstation resulted in an error message and the graying out of all Ponemah menus. Workaround: Lock the Ponemah system and login again.	Fix
44326 45372	Disabled OK, Apply, and Cancel dialog buttons when system is locked while dialogs containing these action buttons are in their open state. The Data Insights dialog and its Search and Edit dialog is also no longer accessible when Data Security timeout locks the application.	Fix

44921	The Data Security Option User Log will now list users added via the Import tool.	Fix
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SEND

Reference #	Description	Disposition
42922	Added a SEND Audit Log allowing users to track and view the source of information when syncing across workstations.	Enhancement
43078	Fix added to permit synchronization and restoring of SEND databases on workstations with Japanese operating system installed.	Fix
43578	Added SEND testcodes QTCAAG, QTCLAG and QTCNS to the Controlled Terminology Manager.	Enhancement
44334	Fix added to remove character limit in SEND EGMMethods that would truncate the text without notifying the user.	Fix
44486	Added a Controlled Terminology Manager to permit users to view and modify SEND Controlled Terminology.	Enhancement
45331	Fixed duplicate TESTCD warning when saving derived data within Review that only differs by EGLEAD.	Fix
45337	Fixed issue where SEND data was not being saved when more than 10 channels in a group had the same algorithm defined.	Fix

Analysis Module Version Matrix

Model	Description	Version
PNM-BP/PAP100W	Blood Pressure / *Pulmonary Arterial Pressure Analysis Modules <i>*This module is embedded in the PNM-PAF100W analysis module</i>	v11.00/v11.00
PNM-BPR100W	Blood Pressure Respiration Analysis Module	v11.00
PNM-CVOL100W	Cardiac Volume Analysis Module	v11.00
PNM-CBF-100W	Coronary Blood Flow Analysis Module	v11.00
PNM-CYS100W	Cystometry Analysis Module	v11.00
PNM-dEMG100W	Diaphragmatic EMG Analysis Module	v11.00
PNM-ECG100W	Electrocardiogram Analysis Module	v11.00
PNM-EMG/EEG100W	Electromyogram* / Electroencephalogram* Analysis Modules <i>*These modules are licensed together.</i>	v11.00/v11.00
PNM-GLU100W	Glucose Analysis Module	v11.00
PNM-LVP100W	Left Ventricular Pressure Analysis Module	v11.00
PNM-MAP100W	Monophasic Action Potential Analysis Module	v11.00
PNM-PAF/AWR100W	Pulmonary Air Flow / *Airway Resistance Analysis Modules <i>*This module is embedded in the PNM-PAF100W analysis module</i>	v11.00/v11.00
PNM-PCR/PCRP100W	Pulmonary Compliance & Resistance Analysis Module / Pulmonary Compliance & Resistance Pressure Analysis Module	v11.00/v11.00
PNM-PT100W	Pulsatile Tissue & Gut Motility Analysis Module	v11.00
PNM-PVO100W	Pulmonary Volume Analysis Module	v11.00
PNM-SBF100W	Systemic Blood Flow Analysis Module	v11.00
PNM-URP100W	Unrestrained Plethysmography Analysis Module	v11.00
	RAW* Electrical Mean (TEMP, BARO, ACT) <i>*Default modules provide with Ponemah Core Software</i>	v11.00