

## Product Release Notes

**Product:** PONEMAH Physiology Platform  
**Model:** P3 Plus  
**Version:** 4.70  
**Build:** J02910 (CD Build)  
**Date:** September, 2007

Product Release Notes for PONEMAH Physiology Platform (P3 Plus) Version 4.70 indicate revisions made to the P3 Plus core application since release of P3 Plus Version 4.60 Service Pack 1 (4.60 SP1). For information regarding changes to the software from previous versions, please refer to the Release Notes folder located on the Version 4.70 CD. Product Release Notes indicate only revisions to application contents that are part of CD Part #J02910 – Build Version 4.70.

Product Release Notes for P3 Plus do not include information regarding revisions of the P3 Plus Analysis Modules. Information regarding revisions of the P3 Plus Analysis Modules is indicated in separate Product Release Notes.

**Notice for organizations that must comply with FDA's Good Laboratory Practices (GLP) and 21 CFR Part 11 Electronic Records; Electronic Signatures:** P3 Plus Versions may contain **Preview Features**. These **Preview Features** are listed in the Product Release Notes table under the column, "Type of Change". A **Preview Feature** indicates that enhancements have been made to P3 Plus, but have not been validated. Instead, Data Sciences International (DSI) has opted to delay complete validation until receiving comments from customers regarding use of these features. Further validation of these features will be performed in later releases of P3 Plus. There may be additional **Preview Features** that had been documented in previously released versions that are not documented here. These features are not available unless manually enabled by the user. If documentation is needed regarding these features, please contact the Technical Support Group at DSI.

Reference #	Type of Change	Key: N = New Feature; E = Enhancement; F = Fix
Description		
P3 Core - General		
N/A	N	Data Synchronization allows hardwired (ACQ16 USB and ACQ7700 USB acquisition interfaces) and telemetry signals to be collected simultaneously without the need for converters.
N/A	N	Channel Configuration is a feature that allows the user to reorganize the Channel List that P3 Plus will utilize. An example of this feature would allow a Synchronized system to reorder the channel list so that channels assigned to individual subjects may be in consecutive order. Additional benefits include the ability to remove unnecessary channels from the channel list. This can be used with other P3 Plus acquisition devices and is not Sync specific.
N/A	N	P3 Plus Video allows the recording of up to 8 video streams in addition to recording the traditional physiological signals. This video data is synchronized with the RAW data and saved to disk allowing for Review of both data.
N/A	E	Modified how changes are logged when a reanalysis of the data is performed. Previously, all mark position changes were logged for each cycle over the range of data analyzed. This possibility existed where limits of Excel and Access could be exceeded. This has now been changed to reflect the range of data that has been reanalyzed and not individual mark information.
N/A	E	Removed the Event setup information from the Groups and Events dialog (PPP3 Setup menu) into its own menu for ease in access and to allow additional features to be added to the Group Setup menu.
N/A	E	Added additional functionality to the Groups setup menu. Added support for Video to allow the association of a camera to a Group. Also, added Species support which assigns default values to various Analysis Attribute settings based on the species selected.
N/A	E	Removed the legacy text files. These files are no longer generated by default. Data is ported directly to Excel or Access via ODBC (Open Data Base Connectivity)-previously implemented feature.  NOTE: if ODBC was not previously enabled (prior version), this feature will need to be enabled prior to acquisition.
1844	F	If greater than 128 channels were configured using an ACQ7700 and an acquisition started, Ponemah would close. This has been corrected utilizing the Channel Configuration feature implemented in version 4.70. This feature will be useful in large channel counts using telemetry and Data Synchronization (telemetry and hard-wired signals).
2553	F	A problem existed where opening Review files would cause Ponemah to close. This occurred if two hard drives were used in a single computer where the Ponemah program was loaded on one drive and the LSS_Data folder was configured to the other drive. Additionally, the drive where the program resided needed to be smaller than the drive where the Review file resided (LSS_Data folder is the default location). The issue resulted from the disk space being incorrectly reported and has been corrected.

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		Description
2561	F	The Disk Space and Disk Time (Digital Displays) displays were previously reversed. Disk Space displayed Disk Time and Disk Time displayed Disk Space. This has been corrected to appropriately display the correct parameter.
2564/2612	F	Ponemah would close if Data Storage Scheduler was used to start an acquisition with no Data Storage Scheduler cycles defined. Ponemah was not checking to see if valid cycles existed in Data Storage Scheduler before starting an acquisition. This has been corrected to not allow Data Storage Scheduler to start if no cycles have been defined. Additionally, the 'Start Acquisition with Scheduler' option stays enabled if a new cycle in the Data Storage Scheduler dialog is created and then immediately deleted. If the acquisition is then started, the Ponemah program will close.
2606	F	If a Page View graph is enabled and then disabled, the Unit cell can still be modified in the disabled state. This has been corrected to not allow modifications when the page is disabled.
2609	F	The Save On icon located on the main Ponemah window did not correctly update. This occurred when "Save Raw Data On" was disabled in the Settings dialog and Data Storage Scheduler was set to start acquisition but not save Derived or Raw data. When an acquisition was started, the Save On icon was displayed when the Save Off icon should have been displayed. This has been corrected.
2611	F	When a Timer was configured in the Digital Display Setup menu (Timer Up or Timer Down), the alarm would sound when the appropriate time was reached during an acquisition. However, the alarm would not stop when the timer was disabled. Ponemah had to be restarted in order for the disabled setting to take affect. This has been corrected to allow the alarm to be shut off during acquisition.
N/A	E	Implemented the <b>Hardware</b> pull-down menu which replaces the previous <b>Calibration</b> menu. The <b>Hardware</b> menu allows the user to access the specific acquisition hardware based dialogs. This change has been implemented to allow a uniformed and structured method to handle the various acquisition interfaces. This dialog will change depending on the acquisition device connected to the system.
<b>Data Review</b>		
N/A	N	Added Template Analysis for the ECG algorithm while in Review. Template Analysis allows selection of a "template" cycle which is then used for comparison against other cycles in the dataset. User defined criteria sets the acceptable degree of match between the template cycle and the data in the file. Mark placement (Validation marks) is adjusted automatically in the data set based on the template(s). Additionally, multiple templates can be used in a dataset and templates can be added to a template library which can be utilized in other studies. Reanalysis using templates can be done to only unmatched cycles greatly reducing the time to review data.
N/A	N	Added toolbar buttons in Review to search for the next/previous Unmatched Cycle ( see Template feature) and Bad Data Marks.

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		Description
N/A	E	Increased the cycle number display in Review from three digits to five digits. Cycle numbers previously reset after 999. Cycle numbers will now reset to one after 99999.
N/A	E	Added the ability to remove Bad Data Marks over a range of data in addition to removing a single Bad Data Mark. These ranges include: visible region in the graph page; region from the left edge of the graph page to the end of the data; and the entire channel.
2578	F	When saving Parsed Derived Data with Data Reduction enabled, the progress dialog for Data Reduction listed a numerical value, Group "1", instead of the alpha designation (Group A). This was a label issue in the progress dialog and did not affect data output.
2615	F	RAW files generated in older versions of Ponemah (4.00 and earlier) may not have been properly read by Review resulting in the Ponemah program closing. This error did not occur if using the ACQ7700 platform. The issue resulted from utilizing multiple sample rates and how Review read the first sample point. A possibility existed when starting an acquisition where the saving of RAW data was initially turned off, Review would calculate the position of the first sample for a channel at the slower rate incorrectly. This has been corrected.
2617	F	If changes were made to the protocol while acquiring data, the acquisition then stopped and the subsequent Review file opened from the Recent Review Files list, the message did not post providing the user with the option to save the changes at that point. However, upon closing the Review file and existing P3, the system would prompt the user to save changes to the acquisition protocol at that time. This has been changed to prompt the user to save changes prior to entering Review.
2697	F	If a user changed the channel on a graph page to a channel that used a different analysis module, performing a reanalysis on that channel would result in P3 opening the attributes dialog for the analysis associated with the previously used channel. This has been corrected.
2659	F	When saving a Marks section in Review, changing the case would result in a dialog being posted stating that the name already exists and do you wish to overwrite this file. Selecting "Yes" would generate several errors. This has been corrected. Now the saving of marks is not case sensitive and the files will be overwritten.
2618	F	If a Review file is opened through Study, excluding channels from Review using the Select Review Channels results in no data in the database after saving the new Run information. The ability to exclude channels from Review while in the Run Study dialog has been removed.
<b>Study Protocol Option</b>		
N/A	N	Network Study has been added to the Study Protocol Option. This feature allows the user to define P3 workstations on a domain which will be used during a study. The Network Study option allows protocol information and data to be automatically synchronized across workstations on the domain.
N/A	N	The ability to verify the study setup while in the Study dialog has been added. This allows users to check for errors during setup, prior to acquisition.

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N/A	E	Added the ability to add Workups and Doses after study run information has been collected.
N/A	E	Due to the ability to synchronize data automatically using Network Study, the Backup Study GUI (Graphical User Interface) has changed. Study database information is still backed up using this feature and includes the Study Setup information, the log file, the Derived Data, the Data Reduction data, and information on all of the runs ran for the specified Study.
2596	F	Setup Components were case sensitive and changes to upper and lower case letters would result in Ponemah closing if modifications were made after an acquisition was run. If an acquisition was run and modifications were then made to the Setup Components (for example, changed "dog1" to "Dog1"), Ponemah would close when the next acquisition was performed.
2599	F	The ability to add the "&" character in the Subject Info field (Setup Components) is allowed. However, this symbol was not being displayed in the Information section of the Run Study dialog. This has been corrected.
2600	F	Use of special characters should be avoided when specifying a Study Name. However, the symbols "/" and ";" were able to be entered which generated subsequent errors. Study has been updated to not allow these special characters in the Study Name field when creating a new Study.
2601	F	Studies were able to be created and saved using the following characters: % ^ + { } [ ] , . ` ~. However, errors were generated when using the Backup feature for studies that contained these characters in the name. Study has been updated to not allow these special characters in the Study Name field when creating a new Study.
<b>Vivometrics</b>		
N/A	N	Support for the VivoMetrics LifeShirt has been added to Ponemah version 4.70. This is an optional interface that allows cardiopulmonary signals from the LifeShirt to be collected and analyzed directly by the Ponemah system.
<b>DSI OpenART</b>		
N/A	E	The location for accessing the OpenART interface has been moved to the <b>Hardware</b> pull-down menu (previously was located in the Setup menu). The <b>Hardware</b> menu allows the user to access the specific acquisition hardware based dialogs. This change has been implemented to allow a uniformed and structured method to handle the various acquisition interfaces and is based off of the 7700 acquisition engine.
<b>JET (Jacketed External Telemetry)</b>		
N/A	N	Added support for the JET 6ETA device. The 6ETA can be configured for up to six differential channels or up to a 10-lead ECG depending on the cable connected to the device. All configurations support Temperature and Activity with a maximum channel count of 12 per device.

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N/A	E	The location for accessing the JET interface has been moved from the <b>Acquisition Interface</b> tab to the <b>Hardware</b> pull-down menu. The <b>Hardware</b> menu allows the user to access the specific acquisition hardware based dialogs. This change has been implemented to allow a uniformed and structured method to handle the various acquisition interfaces and is based off of the 7700 acquisition engine. The JET interface was implemented under the 7700 acquisition umbrella in version 4.60 and the access point was moved to the Hardware menu for version 4.70.
N/A	E	Additional sample rates are now supported by JET. Primary sample rates of 250, 500 and 1000Hz have been added in addition to the native 750Hz sampling rate.
N/A	E	Added a new feature to automatically optimize the communication between the JET Bluetooth receivers and the Ponemah system which will help reduce the number of bad packets and reconnects when using multiple JET receivers are used. The <b>JET Receiver RF Optimizer</b> will automatically set the RF bands in use by each of the selected JET Bluetooth Receivers.
<b>ACQ16 USB Acquisition Interface</b>		
2471	F	The ability to select a maximum rate per channel of 100,000 was available. However, if this sample rate was selected and the dialog closed and reopened, the Primary and Secondary selections were blank. Additionally, an error was reported if an acquisition was started. This has been corrected by only allowing the proper maximum sample rate of 50,000 per channel to be selected for this device.
<b>Data Security Option (DSO)</b>		
2683	F	If the Group - Trigger Channel feature was restricted and the user configured multiple groups in the Channel Input Setup, clicking on the OK button posted a message stating that the user did not have access to the Trigger channels. This has been corrected so that when a user configures Groups, the Trigger channel is automatically defined and assigned to the first channel in the Group while still maintaining the security restriction to not allow users to modify Trigger channels.