BrainScope® Company Inc.
Document #:R-00295

Software Release Notes, BrainScope® One

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1.0   Purpose and Scope

This document summarizes the new features and known issues for BrainScope® One Software Releases. Note, BrainScope® One was cleared as Ahead® 300. This is customer-facing document. All the known issues reported in this document are relevant to customers. For a list of all known issues, please contact BrainScope Company.

2.0   Definitions

2.1   ACE - Acute Concussion Evaluation

2.2   BESS – Balance Error Scoring System

2.3   CPA – Cognitive Performance Assessment

2.4   CSI – Concussion Symptom Inventory

2.5   DAB – Data Acquisition Board

2.6   EEG – Electroencephalogram/Electroencephalograph

2.7   GSC - Graded Symptom Checklist

2.8   MACE – Military Acute Concussion Examination

2.9   Maddocks Score – assessment of concussion on the sports sidelines (5 questions part of SCAT3)

2.10   mBESS - Modified Balance Error Scoring System

2.11   NFL – National Football League

2.12   NFL SCAT – NFL Sports Concussion Assessment Tool

2.13   SAC - Standardized Assessment of Concussion

2.14   SCAT3 – Sports Concussion Assessment Tool 3rd Edition

2.15   SD – Secure Digital (memory card)

3.0 Introduction

Every BrainScope® One Software release is accompanied by a corresponding release note that describes the features and known issues incorporated into the release.

The known issues listed in this document are such that they do not compromise the primary function of the device and appropriate work-arounds are provided for the user and defined for each issue.

4.0 Release Notes

4.1 Release 2.15.5100

Table 1 Version Information on the About Screen

Application	r 2.15.5100
Firmware	2.12.3599
Algorithm	2.0.188
Xloader	2.0.6-B123
Bootloader	2.0.6-B123-8-ge48b989
Kernel	2.0.5-B122-30-g2d5e6a5
Recovery	2.0.6-B123-10-gb49b71f
System	2.0.6-134

4.1.1 Build Date: 8-8-2018

4.1.2 Purpose

4.1.2.1 This is a functional SW release of BrainScope® One handheld software for its intended purpose with the listed known issues. The purpose of the release is for commercial use.

4.1.3 New Features and Issues Resolved in Release 2.15.5100

4.1.3.1 This is considered an official SW release that adds several software enhancements and bug fixes.

4.1.3.2 4.4.3.2 Refer to the following tables for detailed lists of new features and issues resolved in the build.

Table 2 New Features in Release 2.15.5100

Ticket #	Issue	Type	Component	Severity
1019	**Description:** To support activation for devices upgraded from R2.15A to R2.15B, a new activation file must be referenced. **User impact:** Yes **Summary:** If this is not done, a device upgrading from R2.15A to R2.15B will	Enhancement	Prod-Handheld-Application	Minor

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Ticket #	Issue	Type	Component	Severity
	not require an activation code to be entered after the update has completed.			

Table 3 Resolved Issues in Release 2.15.5100

Ticket #	Issue	Type	Component	Severity
1018	**Description:** The summary page of the PDF report shows incorrect clarifying text detail (Average or Above/Below Average/Clearly Below Average) for Match to Sample in certain cases. This only occurs when the Complex Reaction Time and Match to Sample results are different. The box color around the result and the summary A/B/C letter is correct. **User impact:** Yes **Summary:** Incorrect Match To Sample clarifying text is presented to the user on PDF report when CRT and M2S are different.	Defect	Prod-Handheld-Application	minor

Table 4 Known Issues in Release 2.15.5100

Ticket #	Issue	Type	Component	Severity
68	**Description:** Parts of the UI sometimes get destroyed and recreated shortly after startup. **User impact:** Yes **Summary:** The defect may cause the UI to disappear for less than a second shortly after startup. **Workaround:** The workaround is to wait briefly for the UI to reappear.	Defect	Prod-Handheld-Application	minor
71	**Description:** Fix all routine errors and warnings listed in the logs at startup and during operation. **User impact:** Yes **Summary:** This defect may cause a very brief, a fraction of a second, delay in some areas of the application. **Workaround:** The workaround is to wait a fraction of a second while operating the device when the issue occurs.	Defect	Prod-Handheld-Application	minor
92	**Description:** Reset the USB driver on	Defect	Prod-	minor

Ticket #	Issue	Type	Component	Severity
	the handheld and/or DAB to fix the connection. **User impact:** Yes **Summary:** Occasionally, the USB communication between the DAB and handheld fails (this issue usually occurs at startup). Powering off and back on fixes the connection. It would be better to reset the USB driver on the handheld and/or DAB to fix the connection so that the user does not need to power it off and back on. **Workaround:** The workaround is to power the device off and back on to fix the connection.		Handheld-Application	
93	**Description:** The ACK frame index interpretation may get out of sync. **User impact:** Yes **Summary:** If the ACK frame index interpretation gets out of sync, the EEG assessment may not start correctly. **Workaround:** The workaround is to cancel and restart the EEG assessment soon after attempting to start it.	Defect	Prod-Handheld-Application	minor
264	**Description:** Improve low battery popups. Prevent user from circumventing the low battery warning. **User impact:** Yes **Summary:** If the user circumvents the low battery warning and starts an assessment, the device may automatically power down while the assessment is in progress, which means the user will lose the in-progress work. **Workaround:** The workaround is that the user will need to charge up the device, power back on, resume the patient and injury, and restart the assessment from the beginning.	Defect	Prod-Handheld-Application	minor
418	**Description:** Cognitive Performance assessment may crash to home screen when user is button-mashing. **User impact:** Yes **Summary:** When the screen is tapped rapidly, the Cognitive Performance assessment will sometimes crash to the	Defect	Prod-Handheld-Application	minor

Ticket #	Issue	Type	Component	Severity
	home screen. **Workaround:** The user can work around the issue by not rapidly button-mashing during the Cognitive Performance assessment. Simply performing the test correctly is the workaround.			
431	**Description:** Empty folders may be created in EEG session folder. **User impact:** Yes **Summary:** When patient data is exported to the external SD Card, some empty EEG session folders may be created. **Workaround:** The user will need to ignore the empty folders when exporting the patient data to the external SD Card.	Defect	Prod-Handheld-Application	minor
577	**Description:** Investigate and fix potential memory leak due to persistent fragments. **User impact:** Yes **Summary:** There may be fragments that cannot be destroyed due to persistent UI elements. This equates to a potential memory leak in the application. For long term stability, the reason for persistence of these UI elements needs to be investigated and addressed. **Workaround:** The workaround is to power the device off and back on to clear the leaked memory.	Defect	Prod-Handheld-Application	minor
699	**Description:** Night mode option that will darken all screens used in a military environment. **User impact:** Yes **Summary:** The application software should allow the user to select a night mode option that will darken all screens used in a military environment (general screens, EEG, and MACE). **Workaround:** Set the brightness to the lowest level on the Device Settings screen. Ticket #883 was opened and fixed in this software release to add a capability to reduce the brightness of all screens in the BrainScope application	Defect	Prod-Handheld-Application	minor

Ticket #	Issue	Type	Component	Severity
	using both the backlight and a semi-transparent overlay that will further reduce the brightness. This enhances the workaround of setting the brightness to the lowest level.			
800	**Description:** The application may stall when exporting a large amount of log files. **User impact:** Yes **Summary:** The bash script that is used to perform the redaction of PHI and then export of the logs may stall when processing thousands of log files. **Workaround:** The workaround is to avoid exporting more than 1 week of logs at a time.	Defect	Prod-Handheld-Application	minor
859	**Description:** Cognitive Performance assessment may skip a couple of steps of instructions. **User impact:** Yes **Summary:** During the instruction portion of the test the Athlete pressed the button, but the device did not respond. The athlete re-pressed the button. The device was reported to lag behind from when the touch screen button was pressed. After the second depression of the button, the screen advanced two screens. **Workaround:** The workaround is to wait for the Cognitive Performance assessment application to respond, even if it does not respond immediately to the user's touch. If the application skips past the instructions, and the user needs to read them, the device must be powered off to cancel the test. Then it can be restarted and the patient, injury, and Cognitive Performance assessment can be reopened.	Defect	Prod-Handheld-Application	minor
907	**Description:** User can enter injury age that is older than patient. **User impact:** Yes **Summary:** The defect will allow the user to enter an injury that occurred before the patient was born, which is	Defect	Prod-Handheld-Application	minor

Ticket #	Issue	Type	Component	Severity
	nonsensical. **Workaround:** The workaround is to not enter an injury that occurred before the patient was born.			
908	**Description:** Generating a report for a patient whose report is currently or recently opened over USB/SD causes catastrophic error on the PC. **User impact:** Yes **Summary:** Generating a report for a patient whose report is currently or recently opened over USB/SD causes catastrophic error on the PC and makes the report inaccessible - resolvable by unplugging device and regenerating report". **Workaround:** The workaround is to unplug the device, regenerate the report, and then plug the device back in to view it on the PC.	Defect	Prod-Handheld-Application	minor
909	**Description:** Can enter the keyboard and languages settings via the comma key on the keyboard. **User impact:** Yes **Summary:** This may allow access to other menu settings options that are not normally accessible. If you enable the Japanese keyboard, it is not feasible to return to the original keyboard layout. A curious user could accidently render the device poorly usable. **Workaround:** If a user does enable the Japanese keyboard on a device, the workaround is for BrainScope authorized personnel to install an engineering build of the BrainScope One software on the device and use commands to reset the keyboard settings back to the default.	Defect	Prod-Handheld-Application	minor
910	**Description:** Can save names to dictionary used by the soft keyboard. **User impact:** Yes **Summary:** User can save words such as a unique patient name to the soft keyboard's dictionary when on the review notes screen.	Defect	Prod-Handheld-Application	minor

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Ticket #	Issue	Type	Component	Severity
	Workaround: The workaround is to not save words to the soft keyboard's dictionary.			
911	**Description:** When copying whole Logs folder over a warning in windows 10 said "Unspecified Error". **User impact:** Yes **Summary:** An error may occur when the user attempts to copy the whole Logs folder off of a device. **Workaround:** The workaround is copy portions of the exported log files in smaller subsets, rather than attempting to copy all of the Logs folder at once.	Defect	Prod-Handheld-Application	minor
913	**Description:** Stability logs are not deleted from system folders on the internal SD card. **User impact:** Yes **Summary:** This ticket is open for either resolving the permission issue or modifying the script to subset the stability logs to the date range for the log export selected by the user. **Workaround:** The workaround is to wait extra time for the log export to finish.	Defect	Prod-Handheld-Application	minor
922	**Description:** Remove Patient ID from logs, files, filenames, etc. **User impact:** Yes **Summary:** Patient ID is used in file names of patient data files, encrypted log files, non-encrypted log files, and the PDF report. **Workaround:** The workaround is a caution statement in the user manual and only allowing customers to return log files (not patient files or PDF Report) to BrainScope. Log files returned by customers will be redacted using the BrainScope Decryption and Redaction Tool (BDRT).	Defect	Prod-Handheld-Application	minor
991	**Description:** Impedances at times do not display OFF or a value. **User impact:** Yes **Summary:** When impedances are either very low (below 100 ohms) or NaN, the GUI does not displaying anything on the	Defect	Prod-Handheld-Application	minor

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Ticket #	Issue	Type	Component	Severity
	electrode on the impedance screen. This should be remedied to either display OFF, or some other indication of the impedance being received. **Workaround:** The workaround is to interpret blank impedance values as OFF.			
997	**Description:** Export EEG in EDF will produce a file that fails the Matlab verification when USB communication interruptions cause data to repeat, never arrive, and/or arrive out of sequence. **User impact:** Yes **Summary:** Immediate repeats of EEG data sub epochs are not included in the EDF, but the Export EEG in EDF feature currently treats other out of sequence data as contiguous. **Workaround:** The workaround is to ignore small glitches in the EDF that may occur due to out of sequence data caused by USB communication interruptions, which rarely occur unless a device's USB cable hardware is starting to fail. The EEG in EDF Export Success pop up message includes the note, "Note: EEG waveforms in European Data Format(EDF) are provided for informational purposes only."	Defect	Prod-Handheld-Application	minor
998	**Description:** Resuming an interrupted EEG results calculation causes the Export EEG in EDF to be split into two parts, with the second part containing only the last epoch. **User impact:** Yes **Summary:** When an interrupted EEG results calculation is resumed, the EEG data is played back to BSAL for the results calculation. When that occurs, a splitinfo file is created for the EEG. The splitinfo file should only be created when resuming an EEG collection, not an EEG results calculation for which all of the EEG data has already been	Defect	Prod-Handheld-Application	minor

Ticket #	Issue	Type	Component	Severity
	collected. **Workaround:** The workaround is view most of the EDF data in the *_part1.edf file, and view the last epoch (2.56 seconds) in the *_part2.edf file.			
1021	**Description:** When upgrading a device from R2.15A to R2.15B, the about screen, associated JSON file, and BMSG generated will all be based on data generated while running R2.15A if when booting up, the device is still connected to a PC and therefore unable to communicate with the DAB. **User impact:** Yes **Summary:** This will cause the activation code provided for the device for this upgrade path to not work until the user reboots the device with the cable unplugged from the PC. **Workaround:** Ensure that the BrainScope One unit is not connected to a PC prior to boot after the upgrade has taken place. If the device has already encountered the issue, reboot the device with the BrainScope One unit not connected to a PC.	Defect	Prod-Handheld-Application	minor

4.2 Release 2.15.5067

Table 5 Version Information on the About Screen

Application	r 2.15.5067
Firmware	2.12.3599
Algorithm	2.0.188
Xloader	2.0.6-B123
Bootloader	2.0.6-B123-8-ge48b989
Kernel	2.0.5-B122-30-g2d5e6a5
Recovery	2.0.6-B123-10-gb49b71f
System	2.0.6-134

4.2.1 Build Date: 6-22-2018

4.2.2 Purpose

4.2.2.1 This is a functional SW release of BrainScope® One handheld software for its intended purpose with the listed known issues. The purpose of the release is for commercial use.

4.2.3 New Features and Issues Resolved in Release 2.15.5067

4.2.3.1 This is considered an official SW release that adds one bug fix that has no user impact.

4.2.3.2 No new features were added and no issues with user impact were resolved in the build.

Table 6 Known Issues in Release 2.15.5024

Ticket #	Issue	Type	Component	Severity
68	**Description:** Parts of the UI sometimes get destroyed and recreated shortly after startup. **User impact:** Yes **Summary:** The defect may cause the UI to disappear for less than a second shortly after startup. **Workaround:** The workaround is to wait briefly for the UI to reappear.	Defect	Prod-Handheld-Application	minor
71	**Description:** Fix all routine errors and warnings listed in the logs at startup and during operation. **User impact:** Yes **Summary:** This defect may cause a very brief, a fraction of a second, delay in some areas of the application. **Workaround:** The workaround is to wait a fraction of a second while operating the device when the issue occurs.	Defect	Prod-Handheld-Application	minor
92	**Description:** Reset the USB driver on the handheld and/or DAB to fix the connection. **User impact:** Yes **Summary:** Occasionally, the USB communication between the DAB and handheld fails (this issue usually occurs at startup). Powering off and back on fixes the connection. It would be better to reset the USB driver on the handheld and/or DAB to fix the connection so that the user does not need to power it off and back on. **Workaround:** The workaround is to power the device off and back on to fix the connection.	Defect	Prod-Handheld-Application	minor
93	**Description:** The ACK frame index interpretation may get out of sync.	Defect	Prod-Handheld-	minor

Ticket #	Issue	Type	Component	Severity
	User impact: Yes **Summary:** If the ACK frame index interpretation gets out of sync, the EEG assessment may not start correctly. **Workaround:** The workaround is to cancel and restart the EEG assessment soon after attempting to start it.		Application	
264	**Description:** Improve low battery popups. Prevent user from circumventing the low battery warning. **User impact:** Yes **Summary:** If the user circumvents the low battery warning and starts an assessment, the device may automatically power down while the assessment is in progress, which means the user will lose the in-progress work. **Workaround:** The workaround is that the user will need to charge up the device, power back on, resume the patient and injury, and restart the assessment from the beginning.	Defect	Prod-Handheld-Application	minor
418	**Description:** Cognitive Performance assessment may crash to home screen when user is button-mashing. **User impact:** Yes **Summary:** When the screen is tapped rapidly, the Cognitive Performance assessment will sometimes crash to the home screen. **Workaround:** The user can work around the issue by not rapidly button-mashing during the Cognitive Performance assessment. Simply performing the test correctly is the workaround.	Defect	Prod-Handheld-Application	minor
431	**Description:** Empty folders may be created in EEG session folder. **User impact:** Yes **Summary:** When patient data is exported to the external SD Card, some empty EEG session folders may be created. **Workaround:** The user will need to ignore the empty folders when exporting the patient data to the external SD Card.	Defect	Prod-Handheld-Application	minor

Ticket #	Issue	Type	Component	Severity
577	**Description:** Investigate and fix potential memory leak due to persistent fragments. **User impact:** Yes **Summary:** There may be fragments that cannot be destroyed due to persistent UI elements. This equates to a potential memory leak in the application. For long term stability, the reason for persistence of these UI elements needs to be investigated and addressed. **Workaround:** The workaround is to power the device off and back on to clear the leaked memory.	Defect	Prod-Handheld-Application	minor
699	**Description:** Night mode option that will darken all screens used in a military environment. **User impact:** Yes **Summary:** The application software should allow the user to select a night mode option that will darken all screens used in a military environment (general screens, EEG, and MACE). **Workaround:** Set the brightness to the lowest level on the Device Settings screen. Ticket #883 was opened and fixed in this software release to add a capability to reduce the brightness of all screens in the BrainScope application using both the backlight and a semi-transparent overlay that will further reduce the brightness. This enhances the workaround of setting the brightness to the lowest level.	Defect	Prod-Handheld-Application	minor
800	**Description:** The application may stall when exporting a large amount of log files. **User impact:** Yes **Summary:** The bash script that is used to perform the redaction of PHI and then export of the logs may stall when processing thousands of log files. **Workaround:** The workaround is to avoid exporting more than 1 week of logs at a time.	Defect	Prod-Handheld-Application	minor
859	**Description:** Cognitive Performance	Defect	Prod-	minor

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Ticket #	Issue	Type	Component	Severity
	assessment may skip a couple of steps of instructions. **User impact:** Yes **Summary:** During the instruction portion of the test the Athlete pressed the button, but the device did not respond. The athlete re-pressed the button. The device was reported to lag behind from when the touch screen button was pressed. After the second depression of the button, the screen advanced two screens. **Workaround:** The workaround is to wait for the Cognitive Performance assessment application to respond, even if it does not respond immediately to the user's touch. If the application skips past the instructions, and the user needs to read them, the device must be powered off to cancel the test. Then it can be restarted and the patient, injury, and Cognitive Performance assessment can be reopened.		Handheld-Application	
907	**Description:** User can enter injury age that is older than patient. **User impact:** Yes **Summary:** The defect will allow the user to enter an injury that occurred before the patient was born, which is nonsensical. **Workaround:** The workaround is to not enter an injury that occurred before the patient was born.	Defect	Prod-Handheld-Application	minor
908	**Description:** Generating a report for a patient whose report is currently or recently opened over USB/SD causes catastrophic error on the PC. **User impact:** Yes **Summary:** Generating a report for a patient whose report is currently or recently opened over USB/SD causes catastrophic error on the PC and makes the report inaccessible - resolvable by unplugging device and regenerating report". **Workaround:** The workaround is to	Defect	Prod-Handheld-Application	minor

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Ticket #	Issue	Type	Component	Severity
	unplug the device, regenerate the report, and then plug the device back in to view it on the PC.			
909	**Description:** Can enter the keyboard and languages settings via the comma key on the keyboard. **User impact:** Yes **Summary:** This may allow access to other menu settings options that are not normally accessible. If you enable the Japanese keyboard, it is not feasible to return to the original keyboard layout. A curious user could accidently render the device poorly usable. **Workaround:** If a user does enable the Japanese keyboard on a device, the workaround is for BrainScope authorized personnel to install an engineering build of the BrainScope One software on the device and use commands to reset the keyboard settings back to the default.	Defect	Prod-Handheld-Application	minor
910	**Description:** Can save names to dictionary used by the soft keyboard. **User impact:** Yes **Summary:** User can save words such as a unique patient name to the soft keyboard's dictionary when on the review notes screen. **Workaround:** The workaround is to not save words to the soft keyboard's dictionary.	Defect	Prod-Handheld-Application	minor
911	**Description:** When copying whole Logs folder over a warning in windows 10 said "Unspecified Error". **User impact:** Yes **Summary:** An error may occur when the user attempts to copy the whole Logs folder off of a device. **Workaround:** The workaround is copy portions of the exported log files in smaller subsets, rather than attempting to copy all of the Logs folder at once.	Defect	Prod-Handheld-Application	minor
913	**Description:** Stability logs are not deleted from system folders on the internal SD card.	Defect	Prod-Handheld-Application	minor

Ticket #	Issue	Type	Component	Severity
	User impact: Yes **Summary:** This ticket is open for either resolving the permission issue or modifying the script to subset the stability logs to the date range for the log export selected by the user. **Workaround:** The workaround is to wait extra time for the log export to finish.			
922	**Description:** Remove Patient ID from logs, files, filenames, etc. **User impact:** Yes **Summary:** Patient ID is used in file names of patient data files, encrypted log files, non-encrypted log files, and the PDF report. **Workaround:** The workaround is a caution statement in the user manual and only allowing customers to return log files (not patient files or PDF Report) to BrainScope. Log files returned by customers will be redacted using the BrainScope Decryption and Redaction Tool (BDRT).	Defect	Prod-Handheld-Application	minor
991	**Description:** Impedances at times do not display OFF or a value. **User impact:** Yes **Summary:** When impedances are either very low (below 100 ohms) or NaN, the GUI does not displaying anything on the electrode on the impedance screen. This should be remedied to either display OFF, or some other indication of the impedance being received. **Workaround:** The workaround is to interpret blank impedance values as OFF.	Defect	Prod-Handheld-Application	minor
997	**Description:** Export EEG in EDF will produce a file that fails the Matlab verification when USB communication interruptions cause data to repeat, never arrive, and/or arrive out of sequence. **User impact:** Yes **Summary:** Immediate repeats of EEG data sub epochs are not included in the EDF, but the Export EEG in EDF feature	Defect	Prod-Handheld-Application	minor

Ticket #	Issue	Type	Component	Severity
	currently treats other out of sequence data as contiguous. **Workaround:** The workaround is to ignore small glitches in the EDF that may occur due to out of sequence data caused by USB communication interruptions, which rarely occur unless a device's USB cable hardware is starting to fail. The EEG in EDF Export Success pop up message includes the note, "Note: EEG waveforms in European Data Format(EDF) are provided for informational purposes only."			
998	**Description:** Resuming an interrupted EEG results calculation causes the Export EEG in EDF to be split into two parts, with the second part containing only the last epoch. **User impact:** Yes **Summary:** When an interrupted EEG results calculation is resumed, the EEG data is played back to BSAL for the results calculation. When that occurs, a splitinfo file is created for the EEG. The splitinfo file should only be created when resuming an EEG collection, not an EEG results calculation for which all of the EEG data has already been collected. **Workaround:** The workaround is view most of the EDF data in the *_part1.edf file, and view the last epoch (2.56 seconds) in the *_part2.edf file.	Defect	Prod-Handheld-Application	minor

4.3   Release 2.15.5024

Table 7 Version Information on the About Screen

Application	r 2.15.5024
Firmware	2.12.3599
Algorithm	2.0.188
Xloader	2.0.6-B123
Bootloader	2.0.6-B123-8-ge48b989
Kernel	2.0.5-B122-30-g2d5e6a5
Recovery	2.0.6-B123-10-gb49b71f
System	2.0.6-134

4.3.1 Build Date: 6-15-2018

4.3.2 Purpose

4.3.2.1 This is a functional SW release of BrainScope® One handheld software for its intended purpose with the listed known issues. The purpose of the release is for commercial use.

4.3.3 New Features and Issues Resolved in Release 2.15.5024

4.3.3.1 This is considered an official SW release that adds several software enhancements and bug fixes.

4.3.3.2 Refer to the following tables for detailed lists of new features and issues resolved in the build.

Table 8 New Features in Release 2.15.5024

Ticket #	Issue	Type	Component	Severity
135	**Description:** Auto dismiss headset disconnect pop-up when headset is connected. **User impact:** Yes **Summary:** There should only be one headset disconnected/connected popup visible at any time.	Enhancement	Prod-Handheld-Application	Minor
764	**Description:** Replace some icon and button graphics with professionally drawn versions. **User impact:** Yes **Summary:** The revised graphics look much better, but there is no impact on functionality.	Enhancement	Prod-Handheld-Application	Minor
880	**Description:** Resume EEG results calculation if it got stuck or an error occurred. **User impact:** Yes **Summary:** After enough clean EEG has been collected, EEG results are calculated. The results calculation may get stuck or an error may occur, or the EEG Connection may fail, so that results are not provided. The software should be enhanced to provide the capability to resume and retry the results calculation after the user has backed out or powered off and back on.	Enhancement	Prod-Handheld-Application	Minor

Ticket #	Issue	Type	Component	Severity
881	**Description:** Resume EEG collection if it was interrupted by an error, connection failure, power off, or accidental cancel. **User impact:** Yes **Summary:** Added the capability to resume an in-progress EEG collection if it was interrupted by an error, connection failure, or power off. The operator may have collected nearly all the necessary clean EEG data for results calculation before an interruption, so it would be frustrating to have to start over instead of being able to resume and complete the last few clean epochs of EEG collection.	Enhancement	Prod-Handheld-Application	Minor
935	**Description:** Inform user that EEG results cannot be calculated while the device is charging and facilitate results calculation after disconnecting DAB from power. **User impact:** Yes **Summary:** After enough clean EEG has been collected, EEG results are calculated. The results calculation will get stuck if the user connects the device to the charger while results are being calculated, because the handheld needs to communicate with the DAB in order for results calculation to be completed.	Enhancement	Prod-Handheld-Application	Minor
958	**Description:** Update Hub UI. **User impact:** Yes **Summary:** Update hub to improve usability of the device. Also update PDF Report to match new hub.	Enhancement	Prod-Handheld-Application	Minor
959	**Description:** The EEG BFI result will now be calculated when SIC is positive. **User impact:** Yes **Summary:** Previously, the BFI was not processed when the SIC was positive.	Enhancement	Prod-Handheld-Application	Minor
960	**Description:** Modify the EEG SIC and BFI result screens to improve usability of the device. **User impact:** Yes **Summary:** The wording and graphics	Enhancement	Prod-Handheld-Application	Minor

Ticket #	Issue	Type	Component	Severity
	used for results presentation was improved.			
961	**Description:** Add a dedicated Summary log file to report EEG collection statistics. **User impact:** Yes **Summary:** Statistics for time spent on the impedance check screen, time recording is on, time recording is off, and headset connected and disconnected will be recorded for an EEG assessment.	Enhancement	Prod-Handheld-Application	Minor
962	**Description:** Show the Approximate Remaining (AR) during EEG collection. **User impact:** Yes **Summary:** Show the Approximate Remaining (a hybrid of Estimated Time to Complete (time until 100% Complete will be reached) and time until max duration). The value will now start 05:00 and will rise and fall based on how the patient in generating artifacts, but it is limited to a maximum of the time until max duration is reached. The value may fall below the time until max duration if the user is making good progress but will never increase above it. The AR provides an estimate of when the EEG collection will end in either completion (results will be calculated) or Insufficient Data Collected.	Enhancement	Prod-Handheld-Application	Minor
969	**Description:** Modify Database schema to support new features. **User impact:** Yes **Summary:** Additional information will be tracked in the database to show EEG assessment end time, track resume EEG collections, and properly track EEG non-result outcomes.	Enhancement	Prod-Handheld-Application	Minor
971	**Description:** Integrate training video into BrainScope One app. **User impact:** Yes **Summary:** User will have the option to	Enhancement	Prod-Handheld-Application	Minor

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Ticket #	Issue	Type	Component	Severity
	view the refresher training video from the Help menu.			
972	**Description:** Export EEG data in EDF format. **User impact:** Yes **Summary:** The app will support exporting EEG in the European Data Format (EDF), which is a simple and flexible format for exchange and storage of multichannel biological and physical signals.	Enhancement	Prod-Handheld-Application	Minor
974	**Description:** Incorporate Headset Instructions into EEG. **User impact:** Yes **Summary:** Show on device instructions for applying headset before starting EEG.	Enhancement	Prod-Handheld-Application	Minor
975	**Description:** Add Help menu. **User impact:** Yes **Summary:** The Help menu contains: View Refresher Training Video, PDF Report Access Instructions, Impedance Troubleshooting, Handheld Troubleshooting, EEG Data Troubleshooting, and SD Card Troubleshooting.	Enhancement	Prod-Handheld-Application	Minor
976	**Description:** Display PDF report generation success message with instructions to access the PDF report on the SD card. **User impact:** Yes **Summary:** Provide instructions for accessing the PDF Report after it has been generated.	Enhancement	Prod-Handheld-Application	Minor
977	**Description:** Added artifacts Tips pop up. **User impact:** Yes **Summary:** Provide dynamic tips based on what artifacts have occurred in the past two minutes.	Enhancement	Prod-Handheld-Application	Minor
978	**Description:** Show Insufficient Data screen with options to Close session or Start New EEG. **User impact:** Yes	Enhancement	Prod-Handheld-Application	Minor

Ticket #	Issue	Type	Component	Severity
	Summary: Show Insufficient Data screen after Insufficient EEG data collection. Introduce options to either Close or Start New EEG after finishing EEG collection with insufficient data. Show Top two artifacts on Insufficient data screen and artifacts tips before starting New EEG.			
979	**Description:** Change Start Recording button graphics and show on device instructions on Impedance screen. **User impact:** Yes **Summary:** Show on Device instructions with 30 seconds count down before starting recording. Change 'Start Recording' button graphics and text based on impedances. Show Re-prep instructions on request dynamically for specific electrodes in case of invalid impedances.	Enhancement	Prod-Handheld-Application	Minor
980	**Description:** Implement an option to show both Elapsed Time and Approximate Remaining time on EEG screens. **User impact:** Yes **Summary:** Add a device setting to show Elapsed Time or Approximate Remaining time on main timer part of the EEG screens. Always show both Elapsed Time and Approximate Remaining time (One on main EEG timer and other on top of the tabs). Change the background and text inside the bar that is above blue button in dashboard screen to conditionally display "Collecting EEG" with gray background, "EEG Collection on track" with green background, or "Recording Off" with orange background.	Enhancement	Prod-Handheld-Application	Minor
983	**Description:** Update training video to the correct version for release 2.15 **User impact:** Yes **Summary:** The refresher training video was updated for release 2.15 screens and functionality.	Enhancement	Prod-Handheld-Application	Minor

Ticket #	Issue	Type	Component	Severity
984	**Description:** Display popup warning on BFI result screen when SIC is positive. Display same warning on BFI result details page of PDF when SIC is positive. **User impact:** Yes **Summary:** The Warning text will be, "The Brain Function Index (BFI) does not indicate the likelihood of the presence or absence of structural brain injury."	Enhancement	Prod-Handheld-Application	Minor
985	**Description:** Update Settle Time display to meet new UI requirements. **User impact:** Yes **Summary:** The text "Settle Time" will be displayed on the blue timer circle during settle time.	Enhancement	Prod-Handheld-Application	Minor
993	**Description:** When EEG collection has been resumed, the EDF should be divided into two parts. **User impact:** Yes **Summary:** When EEG collection has been resumed, the EDF file should be divided into two parts with separate start times.	Enhancement	Prod-Handheld-Application	Minor

Table 9 Resolved Issues in Release 2.15.5024.

Ticket #	Issue	Type	Component	Severity
198	**Description:** If BSAL and the DAB are out of sync, re-sync them. **User impact:** Yes **Summary:** This issue may occur during EEG data collection. If it occurs, impedance values will not be calculated, and clean data collection progress will not occur.	Defect	Prod-Handheld-Application	minor
912	**Description:** Ran an EEG assessment with a negative result and then tried to start Cognitive Performance assessment, but assessment would not start. This did not seem to be present with any other assessments. **User impact:** Yes **Summary:** If this issue occurs, the Cognitive Performance assessment will	Defect	Prod-Handheld-Application	minor

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Ticket #	Issue	Type	Component	Severity
	not start after an EEG assessment was run.			
916	**Description:** EEG was automatically canceled on the impedance check screen a few seconds after it was started. **User impact:** Yes **Summary:** When a user cancels EEG session and quickly restarts another EEG session, the EEG may get cancelled.	Defect	Prod-Handheld-Application	minor
929	**Description:** The software should reestablish the EEG connection quickly after the device has been connected to a charger and then disconnected. **User impact:** Yes **Summary:** It may fail to reestablish the EEG connection after being connected to a charger and then disconnected. When it does succeed, it takes several more seconds than necessary to do so. The reestablishment of the EEG connection was optimized.	Defect	Prod-Handheld-Application	minor
930	**Description:** When EEG test results in Insufficient Data, the tabbed view list will show the data listed twice. **User impact:** Yes **Summary:** The second event is sent as duplicate.	Defect	Prod-Handheld-Application	Minor
933	**Description:** Database update fails after Device Reset. **User impact:** Yes **Summary:** An error occurred when executing the update directly after a device reset. The devices displayed the Database Upgrade Failure Message at start-up each time power was cycled. This error does not occur if the unit is rebooted prior to executing the update.	Defect	Prod-Handheld-Application	Minor
986	**Description:** Fix issues found during 2.15 preview build testing – part 1. **User impact:** Yes **Summary:** Several small issues were found and fixed during preview build testing. One of the issues was a change the logic to ensure the data quality check	Defect	Prod-Handheld-Application	Minor

Ticket #	Issue	Type	Component	Severity
	is run for both SIC and BFI.			
987	**Description:** Fix issues found during 2.15 preview build testing – part 2. **User impact:** Yes **Summary:** Several small issues were found and fixed during preview build testing. This includes ensuring that DAB information and a count of the amount of clean EEG data collection is logged to aid in complaint investigations. Some issues with the reporting of failures to write files were corrected.	Defect	Prod-Handheld-Application	Minor
992	**Description:** Fix issues found in first round of system verification. **User impact:** Yes **Summary:** A few small issues were found and fixed during the first round of system verification.	Defect	Prod-Handheld-Application	Minor
994	**Description:** Fix issues found in second round of system verification. **User impact:** Yes **Summary:** A few small issues were found and fixed during the second round of system verification.	Defect	Prod-Handheld-Application	Minor

Table 10 Known Issues in Release 2.15.5024

Ticket #	Issue	Type	Component	Severity
68	**Description:** Parts of the UI sometimes get destroyed and recreated shortly after startup. **User impact:** Yes **Summary:** The defect may cause the UI to disappear for less than a second shortly after startup. **Workaround:** The workaround is to wait briefly for the UI to reappear.	Defect	Prod-Handheld-Application	minor
71	**Description:** Fix all routine errors and warnings listed in the logs at startup and during operation. **User impact:** Yes **Summary:** This defect may cause a very brief, a fraction of a second, delay in some areas of the application.	Defect	Prod-Handheld-Application	minor

Ticket #	Issue	Type	Component	Severity
	Workaround: The workaround is to wait a fraction of a second while operating the device when the issue occurs.			
92	**Description:** Reset the USB driver on the handheld and/or DAB to fix the connection. **User impact:** Yes **Summary:** Occasionally, the USB communication between the DAB and handheld fails (this issue usually occurs at startup). Powering off and back on fixes the connection. It would be better to reset the USB driver on the handheld and/or DAB to fix the connection so that the user does not need to power it off and back on. **Workaround:** The workaround is to power the device off and back on to fix the connection.	Defect	Prod-Handheld-Application	minor
93	**Description:** The ACK frame index interpretation may get out of sync. **User impact:** Yes **Summary:** If the ACK frame index interpretation gets out of sync, the EEG assessment may not start correctly. **Workaround:** The workaround is to cancel and restart the EEG assessment soon after attempting to start it.	Defect	Prod-Handheld-Application	minor
264	**Description:** Improve low battery popups. Prevent user from circumventing the low battery warning. **User impact:** Yes **Summary:** If the user circumvents the low battery warning and starts an assessment, the device may automatically power down while the assessment is in progress, which means the user will lose the in-progress work. **Workaround:** The workaround is that the user will need to charge up the device, power back on, resume the patient and injury, and restart the assessment from the beginning.	Defect	Prod-Handheld-Application	minor
418	**Description:** Cognitive Performance assessment may crash to home screen when user is button-mashing.	Defect	Prod-Handheld-Application	minor

Ticket #	Issue	Type	Component	Severity
	User impact: Yes **Summary:** When the screen is tapped rapidly, the Cognitive Performance assessment will sometimes crash to the home screen. **Workaround:** The user can work around the issue by not rapidly button-mashing during the Cognitive Performance assessment. Simply performing the test correctly is the workaround.			
431	**Description:** Empty folders may be created in EEG session folder. **User impact:** Yes **Summary:** When patient data is exported to the external SD Card, some empty EEG session folders may be created. **Workaround:** The user will need to ignore the empty folders when exporting the patient data to the external SD Card.	Defect	Prod-Handheld-Application	minor
577	**Description:** Investigate and fix potential memory leak due to persistent fragments. **User impact:** Yes **Summary:** There may be fragments that cannot be destroyed due to persistent UI elements. This equates to a potential memory leak in the application. For long term stability, the reason for persistence of these UI elements needs to be investigated and addressed. **Workaround:** The workaround is to power the device off and back on to clear the leaked memory.	Defect	Prod-Handheld-Application	minor
699	**Description:** Night mode option that will darken all screens used in a military environment. **User impact:** Yes **Summary:** The application software should allow the user to select a night mode option that will darken all screens used in a military environment (general screens, EEG, and MACE). **Workaround:** Set the brightness to the lowest level on the Device Settings	Defect	Prod-Handheld-Application	minor

Ticket #	Issue	Type	Component	Severity
	screen. Ticket #883 was opened and fixed in this software release to add a capability to reduce the brightness of all screens in the BrainScope application using both the backlight and a semi-transparent overlay that will further reduce the brightness. This enhances the workaround of setting the brightness to the lowest level.			
800	**Description:** The application may stall when exporting a large amount of log files. **User impact:** Yes **Summary:** The bash script that is used to perform the redaction of PHI and then export of the logs may stall when processing thousands of log files. **Workaround:** The workaround is to avoid exporting more than 1 week of logs at a time.	Defect	Prod-Handheld-Application	minor
859	**Description:** Cognitive Performance assessment may skip a couple of steps of instructions. **User impact:** Yes **Summary:** During the instruction portion of the test the Athlete pressed the button, but the device did not respond. The athlete re-pressed the button. The device was reported to lag behind from when the touch screen button was pressed. After the second depression of the button, the screen advanced two screens. **Workaround:** The workaround is to wait for the Cognitive Performance assessment application to respond, even if it does not respond immediately to the user's touch. If the application skips past the instructions, and the user needs to read them, the device must be powered off to cancel the test. Then it can be restarted and the patient, injury, and Cognitive Performance assessment can be reopened.	Defect	Prod-Handheld-Application	minor
907	**Description:** User can enter injury age that is older than patient.	Defect	Prod-Handheld-	minor

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Ticket #	Issue	Type	Component	Severity
	User impact: Yes **Summary:** The defect will allow the user to enter an injury that occurred before the patient was born, which is nonsensical. **Workaround:** The workaround is to not enter an injury that occurred before the patient was born.		Application	
908	**Description:** Generating a report for a patient whose report is currently or recently opened over USB/SD causes catastrophic error on the PC. **User impact:** Yes **Summary:** Generating a report for a patient whose report is currently or recently opened over USB/SD causes catastrophic error on the PC and makes the report inaccessible - resolvable by unplugging device and regenerating report". **Workaround:** The workaround is to unplug the device, regenerate the report, and then plug the device back in to view it on the PC.	Defect	Prod-Handheld-Application	minor
909	**Description:** Can enter the keyboard and languages settings via the comma key on the keyboard. **User impact:** Yes **Summary:** This may allow access to other menu settings options that are not normally accessible. If you enable the Japanese keyboard, it is not feasible to return to the original keyboard layout. A curious user could accidenty render the device poorly usable. **Workaround:** If a user does enable the Japanese keyboard on a device, the workaround is for BrainScope authorized personnel to install an engineering build of the BrainScope One software on the device and use commands to reset the keyboard settings back to the default.	Defect	Prod-Handheld-Application	minor
910	**Description:** Can save names to dictionary used by the soft keyboard. **User impact:** Yes	Defect	Prod-Handheld-Application	minor

Ticket #	Issue	Type	Component	Severity
	Summary: User can save words such as a unique patient name to the soft keyboard's dictionary when on the review notes screen. **Workaround:** The workaround is to not save words to the soft keyboard's dictionary.			
911	**Description:** When copying whole Logs folder over a warning in windows 10 said "Unspecified Error". **User impact:** Yes **Summary:** An error may occur when the user attempts to copy the whole Logs folder off of a device. **Workaround:** The workaround is copy portions of the exported log files in smaller subsets, rather than attempting to copy all of the Logs folder at once.	Defect	Prod-Handheld-Application	minor
913	**Description:** Stability logs are not deleted from system folders on the internal SD card. **User impact:** Yes **Summary:** This ticket is open for either resolving the permission issue or modifying the script to subset the stability logs to the date range for the log export selected by the user. **Workaround:** The workaround is to wait extra time for the log export to finish.	Defect	Prod-Handheld-Application	minor
922	**Description:** Remove Patient ID from logs, files, filenames, etc. **User impact:** Yes **Summary:** Patient ID is used in file names of patient data files, encrypted log files, non-encrypted log files, and the PDF report. **Workaround:** The workaround is a caution statement in the user manual and only allowing customers to return log files (not patient files or PDF Report) to BrainScope. Log files returned by customers will be redacted using the BrainScope Decryption and Redaction Tool (BDRT).	Defect	Prod-Handheld-Application	minor
991	**Description:** Impedances at times do not display OFF or a value.	Defect	Prod-Handheld-	minor

Ticket #	Issue	Type	Component	Severity
	User impact: Yes **Summary:** When impedances are either very low (below 100 ohms) or NaN, the GUI does not displaying anything on the electrode on the impedance screen. This should be remedied to either display OFF, or some other indication of the impedance being received. **Workaround:** The workaround is to interpret blank impedance values as OFF.		Application	
997	**Description:** Export EEG in EDF will produce a file that fails the Matlab verification when USB communication interruptions cause data to repeat, never arrive, and/or arrive out of sequence. **User impact:** Yes **Summary:** Immediate repeats of EEG data sub epochs are not included in the EDF, but the Export EEG in EDF feature currently treats other out of sequence data as contiguous. **Workaround:** The workaround is to ignore small glitches in the EDF that may occur due to out of sequence data caused by USB communication interruptions, which rarely occur unless a device's USB cable hardware is starting to fail. The EEG in EDF Export Success pop up message includes the note, "Note: EEG waveforms in European Data Format(EDF) are provided for informational purposes only."	Defect	Prod-Handheld-Application	minor
998	**Description:** Resuming an interrupted EEG results calculation causes the Export EEG in EDF to be split into two parts, with the second part containing only the last epoch. **User impact:** Yes **Summary:** When an interrupted EEG results calculation is resumed, the EEG data is played back to BSAL for the results calculation. When that occurs, a splitinfo file is created for the EEG. The	Defect	Prod-Handheld-Application	minor

Ticket #	Issue	Type	Component	Severity
	splitinfo file should only be created when resuming an EEG collection, not an EEG results calculation for which all of the EEG data has already been collected. **Workaround:** The workaround is view most of the EDF data in the *_part1.edf file, and view the last epoch (2.56 seconds) in the *_part2.edf file.			

4.4 Release 2.14.4196

Table 11 Version Information on the About Screen

Application	r 2.14.4196
Firmware	2.12.3599
Algorithm	2.0.188
Xloader	2.0.6-B123
Bootloader	2.0.6-B123-8-ge48b989
Kernel	2.0.5-B122-30-g2d5e6a5
Recovery	2.0.10-B133
System	2.0.6-133

4.4.1 Build Date: 10-27-2017

4.4.2 Purpose

4.4.2.1 This is a functional SW release of BrainScope® One handheld software for its intended purpose with the listed known issues. The purpose of the release is for commercial use.

4.4.3 New Features and Issues Resolved in Release 2.14.4196

4.4.3.1 This is considered an official SW release that adds a number of software enhancements and bug fixes.

4.4.3.2 Refer to the following tables for detailed lists of new features and issues resolved in the build.

Table 12 New Features in Release 2.14.4196

Ticket #	Issue	Type	Component	Severity
100	**Description:** Disable audio volume controls. **User impact:** Yes **Summary:** The change disables the volume-up and volume-down buttons on all screens. Note, the volume-up and volume-down buttons are now used to	Enhancement	Prod-Handheld-Application	Minor

Ticket #	Issue	Type	Component	Severity
	control the screen brightness, so they are no longer disabled.			
139	**Description:** Write ANR and stability logs to the SD Card for debugging. **User impact:** Yes **Summary:** Export stability logs created by Android OS. There are several folders that will be encrypted and exported as part of general Logs export triggered by menu option under Administrator Settings.	Enhancement	Prod-Handheld-Application	Minor
663	**Description:** Optimize PDF report generation. Note, this feature was added in the 2.13 software release. This ticket is for merging this capability into the main development branch for inclusion in the 2.14 software release. **User impact:** Yes **Summary:** Enhancements are made to improve PDF report generation. Added UI menu option to allow admin to generate PDF report.	Enhancement	Prod-Handheld-Application	Minor
708	**Description:** PDF Report improvements. Note, this feature was added in the 2.13 software release. This ticket is for merging this capability into the main development branch for inclusion in the 2.14 software release. **User impact:** Yes **Summary:** Many improvements are made to PDF report based on feedback from clinical team.	Enhancement	Prod-Handheld-Application	Minor
772	**Description:** Compare Ahead300.cfg properties with those from assets. **User impact:** Yes **Summary:** A note that the application is using a built-in or custom configuration was added to the About screen.	Enhancement	Prod-Handheld-Application	Minor
811	**Description:** Some inactivity timeouts should be temporarily disabled while long-running processes are in progress. **User impact:** Yes **Summary:** Disable 35min shutdown timer and admin settings timeout to	Enhancement	Prod-Handheld-Application	Minor

Ticket #	Issue	Type	Component	Severity
	allow long running tasks to complete.			
813	**Description:** Log file export - add capability to select a subset of the logs to export. Note, this feature was added in the 2.13 software release. This ticket is for merging this capability into the main development branch for inclusion in the 2.14 software release. **User impact:** Yes **Summary:** A new Log Export screen was added to allow the user to select 1 day, 1 week, or a date range for the logs that will be exported.	Enhancement	Prod-Handheld-Application	Minor
814	**Description:** Remove most writing to the SD Card. Note, this feature was added in the 2.13 software release. This ticket is for merging this capability into the main development branch for inclusion in the 2.14 software release. **User impact:** Yes **Summary:** SD Card should only be written to when a report is generated (automatically or manually) or the user exports some kind of data using Administrator Settings. Otherwise, it should stay empty.	Enhancement	Prod-Handheld-Application	Minor
817	**Description:** Cognitive Performance software should write to internal storage. Note, this feature was added in the 2.13 software release. This ticket is for merging this capability into the main development branch for inclusion in the 2.14 software release. **User impact:** Yes **Summary:** The Cognitive Performance application will be updated to use internal storage instead of the external SD Card. The BrainScope One app will be updated to work with the Cognitive Performance app files in their new storage location.	Enhancement	Prod-Handheld-Application	Minor

Ticket #	Issue	Type	Component	Severity
819	**Description:** Add "Report Settings" to Admin settings and modify PDF report feature as per new requirements. Note, this feature was added in the 2.13 software release. This ticket is for merging this capability into the main development branch for inclusion in the 2.14 software release. **User impact:** Yes **Summary:** Added UI menu option to allow user to choose automatic report generation. Also allow user to populate PDF with patient name, DOB and gender.	Enhancement	Prod-Handheld-Application	Minor
820	**Description:** The application should warn the user that the date and time may be incorrect if the DAB RTC battery has died. Note, this feature was added in the 2.12 software release. This ticket is for merging this capability into the main development branch for inclusion in the 2.14 software release. **User impact:** Yes **Summary:** This is the implementation of a new requirement to warn the user that the date and time may be incorrect if the DAB RTC battery has died.	Enhancement	Prod-Handheld-Application	Minor
821	**Description:** The application should log the DAB RTC battery level. Note, this feature was added in the 2.12 software release. This ticket is for merging this capability into the main development branch for inclusion in the 2.14 software release. **User impact:** Yes **Summary:** This is the implementation of a new requirement to log the DAB RTC battery level.	Enhancement	Prod-Handheld-Application	Minor
827	**Description:** Update USB VID/PIDs and parameters to use BrainScope defined values. Note, this feature was added in the 2.12 software release. This ticket is for merging this capability into the main development branch for inclusion in the 2.14 software release. **User impact:** Yes **Summary:** Changes are made to update	Enhancement	Prod-Handheld-Application	Minor

Ticket #	Issue	Type	Component	Severity
	device parameters and USB VID/PIDs to BrainScope defined values.			
830	**Description:** Creating the SCAT5 Module **User impact:** Yes **Summary:** Added SCAT5 Immediate and Off-Field assessment per SCAT5 (Sports Concussion Assessment Tool 5th Edition) released form.	Enhancement	Prod-Handheld-Application	Minor
838	**Description:** Convert Ahead 300 to BrainScope One on the Android app. **User impact:** Yes **Summary:** This is the implementation of revised requirements to rebrand the Ahead 300 as the BrainScope One.	Enhancement	Prod-Handheld-Application	Minor
839	**Description:** Convert Ahead_300 to BrainScope_One on the MTP interface for USB file transfer. **User impact:** Yes **Summary:** The is the implementation of a new requirement to rebrand the Ahead 300 as the BrainScope One.	Enhancement	Prod-Handheld-Application	Minor
841	**Description:** Enable operator password edit without knowing the current password. **User impact:** Yes **Summary:** Password validity checks are implemented to be more consistent across the New Operator and Edit Operator functionality.	Enhancement	Prod-Handheld-Application	Minor
858	**Description:** Display BFI Percentile on Hub Screen **User impact:** Yes **Summary:** Display the actual BFI percentile (0.0-100.0) on the Information Hub along with the BFI result (A, B, C). The value of the percentile should reside to the right of the letter designation (e.g. "A 80.0"). Also, display the BFI Percentile on the Brain Function Index Tests List screen.	Enhancement	Prod-Handheld-Application	Minor
863	**Description:** Pad DAB serial numbers on About screen. **User impact:** Yes **Summary:** The padding of DAB, DAB-A,	Enhancement	Prod-Handheld-Application	Minor

Ticket #	Issue	Type	Component	Severity
	and DAB-D serial numbers shown on the About screen will be updated from 5 characters to 6 characters.			
866	**Description:** Update wording on EEG pop-up messages **User impact:** Yes **Summary:** Revised the wording of the popups. Also, corrected minor issue with impedance button color thresholds between the data acquisition tabs.	Enhancement	Prod-Handheld-Application	Minor
867	**Description:** Include additional assessments as sideline assessments. **User impact:** Yes **Summary:** This is the implementation of revised requirements to include additional assessments as sideline (available before EEG has been run) assessments.	Enhancement	Prod-Handheld-Application	Minor
868	**Description:** Add IFU warnings and remove 72 hour rule. **User impact:** Yes **Summary:** This is the implementation of new and revised requirements to add IFU warnings and remove 72 hour rule. Previously, the user was not warned when the device is used out of indications for use.	Enhancement	Prod-Handheld-Application	Minor
869	**Description:** Include on-screen information for entering an Operator **User impact:** Yes **Summary:** This is the implementation of new requirements to include on-screen information for entering an Operator. Added pop ups on the fly with onscreen instructions when the input is invalid. Also, added information icon on Operator Edit and Operator addition screens to display onscreen instructions.	Enhancement	Prod-Handheld-Application	Minor
871	**Description:** Perform database upgrade and fix failure cases. **User impact:** Yes **Summary:** Perform and Improve database Upgrade to prevent ANR while upgrading database. Implement and test failure case in database upgrade and	Enhancement	Prod-Handheld-Application	Minor

Ticket #	Issue	Type	Component	Severity
	move database initialization to post UI initialization to display alert to the user in case of failure.			
873	**Description:** Add functionality to allow deletion of log files **User impact:** Yes **Summary:** This is the implementation of a new requirement to include the option for log files to be deleted by an administrator to enhance security of PHI.	Enhancement	Prod-Handheld-Application	Minor
876	**Description:** Remove some logging of PHI from debug log files **User impact:** Yes **Summary:** This is the partial implementation of a new requirement that PHI should not be written to log files, even in internal storage and encrypted log files.	Enhancement	Prod-Handheld-Application	Minor
877	**Description:** Make cognitive performance information pop-ups dynamic. **User impact:** Yes **Summary:** The information pop-ups on the cognitive performance detailed results screens will be updated to include the reason for the A, B, or C composite result.	Enhancement	Prod-Handheld-Application	Minor
878	**Description:** Update wording on headset authentication messages **User impact:** Yes **Summary:** Three headset authentication messages were updated to replace technical details with simple error codes for these messages.	Enhancement	Prod-Handheld-Application	Minor
882	**Description:** Include statement in application that the BrainScope One was cleared as the Ahead 300. **User impact:** Yes **Summary:** On the Preparing Application message that appears at start-up, included the statement "BrainScope One was cleared as Ahead 300".	Enhancement	Prod-Handheld-Application	Minor
883	**Description:** Enable lower brightness option for use in a dark environment. **User impact:** Yes	Enhancement	Prod-Handheld-Application	Minor

Ticket #	Issue	Type	Component	Severity
	Summary: This is the implementation of new requirements to lower the brightness further than the lowest back light setting for use in a dark environment. Brightness is now controlled with both the back light and a semi-transparent overlay. The semi-transparent overlay will reduce the brightness beyond the lowest back light brightness setting.			
888	**Description:** Add warnings for disabling the structural injury classifier. **User impact:** Yes **Summary:** Warn the user that the Brain Function Index (BFI) does not indicate the likelihood of the presence or absence of structural brain injury. Added new dialog in Test Configuration fragment when selecting BFI. Changed the BFI information string. Adjusted the layout on PDF.	Enhancement	Prod-Handheld-Application	Minor
889	**Description:** Minor changes to the Hub display and EEG results on the device and PDF. **User impact:** Yes **Summary:** To make UI experience better to the user, strings were modified and text was formatted on the UI and PDF report. Also, deleted all PDF reports when the app is started for the first time after 2.14 upgrade.	Enhancement	Prod-Handheld-Application	Minor
891	**Description:** Disable the fastboot key combination in commercial and user builds. **User impact:** Yes **Summary:** Entry to fastboot mode is disabled to prevent flashing of device partitions.	Enhancement	Prod-Handheld-uBoot	Minor

Table 13 Resolved Issues in Release 2.14.4196

Ticket #	Issue	Type	Component	Severity
64	**Description:** The k in K ohms should be lower case on the Impedance screen. **User impact:** Yes **Summary:** The k ohms label is correctly	Defect	Prod-Handheld-Application	Minor

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Ticket #	Issue	Type	Component	Severity
	displayed as "k ohms".			
74	**Description:** When recording is off, the dashboard checkmark does not update when the impedance value changes **User impact:** Yes **Summary:** The check mark will be updated for every second based on the impedance values. The condition for one second check should be based on Total time elapsed and previously updated time instead of the recording time and previously updated time.	Defect	Prod-Handheld-Application	Minor
157	**Description:** Display the handheld system clock's time and date more visibly to the user. **User impact:** Yes **Summary:** The date is added to the notification bar to the left of the time.	Defect	Prod-Handheld-Application	Minor
566	**Description:** The age field on the SCAT3 Full assessment should be calculated as the difference between the patient's DOB and the date of exam. **User impact:** Yes **Summary:** Fixed the age calculation to be the difference between patients date of birth and time of assessment.	Defect	Prod-Handheld-Application	Minor
592	**Description:** Non-repeatable crash after Cognitive Performance test was completed. **User impact:** Yes **Summary:** The issue is non-reproducible, and no error logging info is available. The issue was closed after extensive testing showing no repeats of the problem.	Defect	Prod-Handheld-Application	Minor
746	**Description:** Improve timing when loading the patient and assessment lists **User impact:** Yes **Summary:** Saved the results to be displayed as it is in the database instead of fetching and processing for display. The time it takes to load the patient and assessment lists was reduced.	Defect	Prod-Handheld-Application	Minor

Ticket #	Issue	Type	Component	Severity
754	**Description:** The 72-hour check threshold is incorrect **User impact:** Yes **Summary:** Fix a logic issue in the code used to check for 72hr duration.	Defect	Prod-Handheld-Application	Minor
756	**Description:** SCAT3 Tandem Gait. Finish 4 trials. Press Next. Press Previous. Reset is not enabled. **User impact:** Yes **Summary:** Fixed Scat3Full tandem gait reset button and time field to display properly on navigating to and from screen. Fixed Tandem gait reset button to be enabled in a case where user finishes four trials, advances to next screen, and comes back. Disabled stop button when timer is not running, because when user clicks stop button when assessment is not running, its recorded as a trial with previous trials best time. Disabled menu options, back button and home button when timer is running.	Defect	Prod-Handheld-Application	Minor
757	**Description:** Age should be confirmed whenever DOB is modified. **User impact:** Yes **Summary:** Fixed age confirmation dialog to be displayed when date of birth for a patient is modified.	Defect	Prod-Handheld-Application	Minor
761	**Description:** Timeout timers should be reset when returning from Cognitive Performance assessment. **User impact:** Yes **Summary:** Added logic to better handle power down timeout when Cognitive Performance assessment test is started and ended so that the 35-min pop-up doesn't show after the assessment is completed.	Defect	Prod-Handheld-Application	Minor
768	**Description:** Cognitive Performance results display issue. Note, this defect was fixed in the 2.11A software release. This ticket is for merging this fix into the main development branch for inclusion in the 2.14 software release. **User impact:** Yes	Defect	Prod-Handheld-Application	Minor

Ticket #	Issue	Type	Component	Severity
	Summary: The code was modified to display the correct data in the Score column of both Complex Reaction Time and Match to Sample on the Cognitive Performance results screens. Additionally, the labels for the detailed results tables were corrected from "Mean" to "Mean RT" to match the labels on the bar graphs above the detailed results tables.			
773	**Description:** DAB MCU does not de-init ADC after connecting it to VBAT. Note, this defect was fixed in the 2.12 software release of the DAB software. **User impact:** Yes **Summary:** No changes were made for this ticket because it was closed as a duplicate of a previously fixed DAB ticket.	Defect	Prod-DAB-Application	Minor
774	**Description:** Excessive current draw on RTC battery during power-down. Note, this defect was fixed in the 2.12 software release of the DAB software. **User impact:** Yes **Summary:** No changes were made for this ticket because it was closed as a duplicate of a previously fixed DAB ticket.	Defect	Prod-DAB-Application	Minor
803	**Description:** Crash when pressing the search button on a locked screen. **User impact:** Yes **Summary:** Added null check against "view" parameter inside unlock method to make sure that only a valid "view" object can be removed that is attached to window manager.	Defect	Prod-Handheld-Application	Minor
804	**Description:** Crash when pressing the back button in EEG Data Review **User impact:** Yes **Summary:** Code that updates the text on the time display button which check if the button is null before attempting to update it.	Defect	Prod-Handheld-Application	Minor

Ticket #	Issue	Type	Component	Severity
806	**Description:** Crash when turning display off during EEG. **User impact:** Yes **Summary:** Moved views initialization and destruction to proper places. Handled waveform drawing threads for turning screen off and back on.	Defect	Prod-Handheld-Application	Minor
807	**Description:** Start buttons locked after attempting to start an EEG session **User impact:** Yes **Summary:** Several issues were identified, which cause the Start buttons to stay locked after an EEG fails to start. The fix enabled the Start buttons on the hub when the EEG cannot move forward from Hub due to USB connection interruption.	Defect	Prod-Handheld-Application	Minor
808	**Description:** EEG connection messages appear spuriously at times **User impact:** Yes **Summary:** This issue is not repeatable, but may occasionally occur during the transitions from assessments and/or the Cognitive Performance assessment app back to the BrainScope One Information Hub. The fix increases the number of heartbeats that can be missed before alerting the user with a popup to show that the EEG Connection has failed. This will help prevent EEG Connection messages from appearing spuriously.	Defect	Prod-Handheld-Application	Minor
810	**Description:** Fix logic when processing invalid type .bmsg update package. **User impact:** Yes **Summary:** Debugging shows that when processing bad .bmsg, the logic would show the prompt with error code and immediately auto process the back key handling to push the UI back to Administrator Settings. The SW fix adds a flag to indicate that failure occurred and in this case, the app will wait for user input to acknowledge the prompt and then proceed to process the back-key press.	Defect	Prod-Handheld-Application	Minor

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Ticket #	Issue	Type	Component	Severity
812	**Description:** Delete All Patients popup title is incorrect. **User impact:** Yes **Summary:** Used Incorrect string resource. The fix corrected title of delete all patients pop up.	Defect	Prod-Handheld-Application	Minor
815	**Description:** SCAT3 Full portion of PDF not filled under some circumstances when sideline is opened in review mode. Note, this defect was fixed in the 2.13 software release. This ticket is for merging this fix into the main development branch for inclusion in the 2.14 software release. **User impact:** Yes **Summary:** When a specific sequence of steps is followed, the SCAT3 Full portion of the SCAT3 form is not filled in when the PDF report is generated. A logic error in SCAT3 Sideline Review Mode overrides the SCAT3.PDF for the SCAT3 assessment without the SCAT3 Full portion, even though the SCAT3 Full had been completed. This causes the SCAT3 Full portion of the PDF report not to be filled out.	Defect	Prod-Handheld-Application	Minor
816	**Description:** Patient files are not properly deleted when individual patient is deleted from the Current Patient Injuries List screen. Note, this defect was fixed in the 2.13 software release. This ticket is for merging this fix into the main development branch for inclusion in the 2.14 software release. **User impact:** Yes **Summary:** The deletion of patient files has been corrected, so storage space is now properly managed.	Defect	Prod-Handheld-Application	Minor
822	**Description:** DAB MCU does not de-init ADC after connecting it to VBAT. Note, this defect was fixed in the 2.12 DAB software release. **User impact:** Yes **Summary:** No changes were made for this ticket because it was closed as a duplicate of a previously fixed DAB	Defect	Prod-Handheld-Application	Minor

Ticket #	Issue	Type	Component	Severity
	ticket.			
823	**Description:** Excessive current draw on RTC battery during power-down. Note, this defect was fixed in the 2.12 DAB software release. **User impact:** Yes **Summary:** No changes were made for this ticket because it was closed as a duplicate of a previously fixed DAB ticket.	Defect	Prod-Handheld-Application	Minor
826	**Description:** Unencrypted log files contain PHI and non-encrypted data. Note, this defect was fixed in the 2.12 software release. This ticket is for merging this fix into the main development branch for inclusion in the 2.14 software release. **User impact:** Yes **Summary:** The problem was caused by the combination of two accidental defects that were introduced to the source code. The accidental changes were reverted so that log messages that are only supposed to only be logged in the encrypted log files (*_lce.txt) are not logged in the non-encrypted log files (*-lc.txt).	Defect	Prod-Handheld-Application	Minor
828	**Description:** Internal encrypted log is not written if SD Card is not available. Note, this defect was fixed in the 2.12 software release. This ticket is for merging this fix into the main development branch for inclusion in the 2.14 software release. **User impact:** Yes **Summary:** The problem is the presence of logic that causes the encrypted logs not to be written if the SD Card is not mounted. A flag is removed so that the application will now always log encrypted messages to internal storage regardless of the status of the SD card.	Defect	Prod-Handheld-Application	Minor

Ticket #	Issue	Type	Component	Severity
842	**Description:** Fix the flow to go to Admin Login screen from operator addition screen in case of zero operators. **User impact:** Yes **Summary:** The code was modified to redirect the flow from the Operator Login screen to the Administrator Access Required screen after first operator addition.	Defect	Prod-Handheld-Application	Minor
843	**Description:** Corner case: Enable saving assessments after device reset without restarting the device. **User impact:** Yes **Summary:** The code was modified so that the Assessment Questions and Assessment Types are now retained when the device is reset.	Defect	Prod-Handheld-Application	Minor
844	**Description:** Test Configuration not saved to database when mechanical back button used to exit the screen **User impact:** Yes **Summary:** The code was modified to save the configuration for every individual assessment type as soon as the check box is clicked.	Defect	Prod-Handheld-Application	Minor
850	**Description:** 1) Fix a text box in Mace to not to hold the older value when an assessment is cancelled and performed again. 2)Text boxes in Mace and other assessments should have correct patient and injury information. **User impact:** Yes **Summary:** Data in the data model is not cleared properly on cancelling the assessment by clicking back or home buttons. The code was modified to clear the data that's populated into the data model after cancelling an assessment before completion. This is done for all other assessments.	Defect	Prod-Handheld-Application	Minor
851	**Description:** Consistently use white text over red background, black text over yellow background, and white text over black backgrounds for EEG and Cognitive Performance results display **User impact:** Yes	Defect	Prod-Handheld-Application	Minor

Ticket #	Issue	Type	Component	Severity
	Summary: The code was modified to make it consistent to use white text over black background, black text on yellow background and white text on red background for buttons that display EEG and CPA results, on the UI and in the PDF report.			
865	**Description:** After DAB cable is disconnected and reconnected during EEG collection, EEG streaming fails to resume. **User impact:** Yes **Summary:** The code was modified so that the handheld will send the proper sequence of DAB commands to resume the EEG collection after the DAB has been reset (powered off and back on) to put the DAB into a state where it is ready to resume streaming EEG and calculate results later when EEG streaming is complete.	Defect	Prod-Handheld-Application	Minor
872	**Description:** Fix Tandem Gait in SCAT3 Full assessment to match the form. **User impact:** Yes **Summary:** The code was modified so that the implementation of the Tandem Gait matches the SCAT3 form.	Defect	Prod-Handheld-Application	Minor
874	**Description:** Fix typo and back button navigation from Test Configuration Screen. **User impact:** Yes **Summary:** The code was modified to fix the Back button navigation for Test Configuration. "Grade Symptom Checklist" was corrected to "Graded Symptom Checklist".	Defect	Prod-Handheld-Application	Minor
885	**Description:** Fix logic when BFI not processed **User impact:** Yes **Summary:** The code was modified to handle 'Not Processed' case for BFI, so that the value of -1.0 is not displayed as part of the Clearly Below Average range.	Defect	Prod-Handheld-Application	Minor

Ticket #	Issue	Type	Component	Severity
887	**Description:** Fix a corner case to prevent email notes screen while leaving an injury after all assessments are run. **User impact:** Yes **Summary:** The code was modified to fix email notes to not to look for mace full assessment when mace sideline result is negative. Also, removed redundant code for EEG check while checking all assessments completion.	Defect	Prod-Handheld-Application	Minor
890	**Description:** Fix XML tag issues in SCAT5 **User impact:** Yes **Summary:** The code was modified to remove redundant XML tags and update some tags with the correct data.	Defect	Prod-Handheld-Application	Minor
892	**Description:** Fix Empty Mace Full and PCPTSD xml files in patient export. **User impact:** Yes **Summary:** Added fix to create XML files during export of MACE and PCPTSD assessments.	Defect	Prod-Handheld-Application	Minor
893	**Description:** Ahead300: Fix time zone to take effect immediately over all assessments. **User impact:** Yes **Summary:** Added workaround to force device shutdown and restart after time zone change.	Defect	Prod-Handheld-Application	Minor
894	**Description:** Unable to view selected assessment in a list view of an assessment such as NFLSCAT or SCAT3. **User impact:** Yes **Summary:** Added fix to all assessments such that screens will be properly initialized to all viewing of selected assessments from the lists of previous tests.	Defect	Prod-Handheld-Application	Minor
895	**Description:** 1. Existing Patient Screen does not show the Patient Name. 2. Device Settings screen and Date & Time screen show the title "BrainScope One Information Hub" instead of "Settings". 3. When pressing the cancel on the brightness message, it thinks you are touching the slider and changes the	Defect	Prod-Handheld-Application	Minor

Ticket #	Issue	Type	Component	Severity
	brightness. **User impact:** Yes **Summary:** Added minor UI fixes to patient screen and settings. Also fixed brightness control logic.			
896	**Description:** 1. Swap button on the MACE Immediate Memory 2 screen does not work. Only List F is available. 2. PDF Report displays "Red" for the Neurological Results, but the color of the text is Green. **User impact:** Yes **Summary:** Added fixes to swap button on MACE Immediate Memory screen. Also, fixed minor text color issue in PDF report.	Defect	Prod-Handheld-Application	Minor
897	**Description:** If multiple CPA tests were run in an injury, only the latest CPA assessment's test files were being exported. **User impact:** Yes **Summary:** Added fix to exported CPA test files to make sure all assessment files are exported.	Defect	Prod-Handheld-Application	Minor
898	**Description:** Application crashed when selected back button (Data Loss Message should appear). **User impact:** Yes **Summary:** Added fix to stability issue when running SCAT5 and BACK button is clicked.	Defect	Prod-Handheld-Application	Minor
900	**Description:** 1. Pressing mechanical back button on Review Version of SAC Start screen returns to SAC Previous Tests Detailed Results Screen. Should return to SAC Previous Test Review screen. 2. Operator ID XML tag is empty. **User impact:** Yes **Summary:** Added minor UI flow fixes to SAC assessment when in review mode. Also, added missing operator ID to XML tag.	Defect	Prod-Handheld-Application	Minor
901	**Description:** 1. Follow-up Action when selecting "No follow up needed", scrolls down to referral section under some circumstances.	Defect	Prod-Handheld-Application	Minor

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Ticket #	Issue	Type	Component	Severity
	2. ACE-PH: The field to enter Date of next follow-up on ACE-PH Follow-Up screen is not selectable under some circumstances. **User impact:** Yes **Summary:** Added fix to resolve logic issues when running ACE-PH assessment and selecting "No follow up needed".			
902	**Description:** 1. Edit Operator screen should not contain the message about password criteria. 2. SCAT5 row was available in report notes screen even though the assessment was configured off. 3. Stability logs were not transferred to Windows 10 or Windows 7 computer (Windows 10 computer also showed a transfer error). **User impact:** Yes **Summary:** Added several fixes to resolve UI issues related to operator edit screen and SCAT5.	Defect	Prod-Handheld-Application	Minor
903	**Description:** Checkboxes for headache patient information screen are not mutually exclusive - just 1 and 2 checkboxes. **User impact:** Yes **Summary:** Added fix to resolve logic issue when selecting checkboxes for headache in Patient Information screen.	Defect	Prod-Handheld-Application	Minor
904	**Description:** 1. Review Hub has "(Review)" cut off in the header. 2. SCAT5 patient information not fully redacted from PDF report. 3. Multiple emailnotes files were present in the patient folder when exported. **User impact:** Yes **Summary:** Added fixes to resolve minor UI issue related to HUB title in review mode. Also, redacted patient PHI in PDF report in SCAT5 form and resolved multiple emailnotes files that were created under patient folder.	Defect	Prod-Handheld-Application	Minor

Ticket #	Issue	Type	Component	Severity
905	**Description:** 1. Previous and Next buttons both disabled in Near Point Convergence assessment. Same issue occurs during Accommodation assessment. 2. SCAT5 email notes is not present in Email Notes xml file. **User impact:** Yes **Summary:** Added fixes to resolve UI issues when running Near Point Convergence and Accommodation assessments. Added SCAT5 email notes.	Defect	Prod-Handheld-Application	Minor
906	**Description:** 1. License screen has active hyperlink (apache) that attempts to open browser unsuccessfully. 2. Can select text on license screen and use toolbar at top of screen. Can click "share" button and attempt to enable Bluetooth (unsuccessfully), attempt to web search (unsuccessfully), select all (successfully), or copy text (successfully) and paste elsewhere **User impact:** Yes **Summary:** 1. Changed Apache link to plain text so that it's not clickable. 2. Added long click listener to ignore the long click and prevent user from selecting text.	Defect	Prod-Handheld-Application	Minor
915	**Description:** Non-repeatable crash when backing out of an EEG quickly after starting it. **User impact:** Yes **Summary:** Added fix to resolve stability issue when user presses Back key immediately after running EEG.	Defect	Prod-Handheld-Application	Minor

4.4.1   Known Issues in Release 2.14.4196

4.4.1.1 Refer to the following table for a detailed list of known issues in the build. Any known issues with user impact have a workaround listed.

Table 14 Known Issues in Release 2.14.4196

Ticket #	Issue	Type	Component	Severity
68	**Description:** Parts of the UI sometimes get destroyed and recreated shortly after startup. **User impact:** Yes **Summary:** The defect may cause the UI to disappear for less than a second shortly after startup. **Workaround:** The workaround is to wait briefly for the UI to reappear.	Defect	Prod-Handheld-Application	minor
71	**Description:** Fix all routine errors and warnings listed in the logs at startup and during operation. **User impact:** Yes **Summary:** This defect may cause a very brief, a fraction of a second, delay in some areas of the application. **Workaround:** The workaround is to wait a fraction of a second while operating the device when the issue occurs.	Defect	Prod-Handheld-Application	minor
92	**Description:** Reset the USB driver on the handheld and/or DAB to fix the connection. **User impact:** Yes **Summary:** Occasionally, the USB communication between the DAB and handheld fails (this issue usually occurs at startup). Powering off and back on fixes the connection. It would be better to reset the USB driver on the handheld and/or DAB to fix the connection so that the user does not need to power it off and back on. **Workaround:** The workaround is to power the device off and back on to fix the connection.	Defect	Prod-Handheld-Application	minor
93	**Description:** The ACK frame index interpretation may get out of sync. **User impact:** Yes **Summary:** If the ACK frame index interpretation gets out of sync, the EEG assessment may not start correctly. **Workaround:** The workaround is to cancel and restart the EEG assessment soon after attempting to start it.	Defect	Prod-Handheld-Application	minor

Ticket #	Issue	Type	Component	Severity
198	**Description:** If BSAL and the DAB are out of sync, re-sync them. **User impact:** Yes **Summary:** This issue may occur during EEG data collection. If it occurs, impedance values will not be calculated, and clean data collection progress will not occur. **Workaround:** The workaround is to cancel and restart the EEG assessment.	Defect	Prod-Handheld-Application	minor
264	**Description:** Improve low battery popups. Prevent user from circumventing the low battery warning. **User impact:** Yes **Summary:** If the user circumvents the low battery warning and starts an assessment, the device may automatically power down while the assessment is in progress, which means the user will lose the in-progress work. **Workaround:** The workaround is that the user will need to charge up the device, power back on, resume the patient and injury, and restart the assessment from the beginning.	Defect	Prod-Handheld-Application	minor
418	**Description:** Cognitive Performance assessment may crash to home screen when user is button-mashing. **User impact:** Yes **Summary:** When the screen is tapped rapidly, the Cognitive Performance assessment will sometimes crash to the home screen. **Workaround:** The user can work around the issue by not rapidly button-mashing during the Cognitive Performance assessment. Simply performing the test correctly is the workaround.	Defect	Prod-Handheld-Application	minor
431	**Description:** Empty folders may be created in EEG session folder. **User impact:** Yes **Summary:** When patient data is exported to the external SD Card, some empty EEG session folders may be created. **Workaround:** The user will need to	Defect	Prod-Handheld-Application	minor

Ticket #	Issue	Type	Component	Severity
	ignore the empty folders when exporting the patient data to the external SD Card.			
577	**Description:** Investigate and fix potential memory leak due to persistent fragments. **User impact:** Yes **Summary:** There may be fragments that cannot be destroyed due to persistent UI elements. This equates to a potential memory leak in the application. For long term stability, the reason for persistence of these UI elements needs to be investigated and addressed. **Workaround:** The workaround is to power the device off and back on to clear the leaked memory.	Defect	Prod-Handheld-Application	minor
699	**Description:** Night mode option that will darken all screens used in a military environment. **User impact:** Yes **Summary:** The application software should allow the user to select a night mode option that will darken all screens used in a military environment (general screens, EEG, and MACE). **Workaround:** Set the brightness to the lowest level on the Device Settings screen. Ticket #883 was opened and fixed in this software release to add a capability to reduce the brightness of all screens in the BrainScope application using both the backlight and a semi-transparent overlay that will further reduce the brightness. This enhances the workaround of setting the brightness to the lowest level.	Defect	Prod-Handheld-Application	minor
758	**Description:** When demo software has EEG data source set to DAB, user should be alerted if EEG data connection fails. **User impact:** Yes (This issue only affects the Demo version of the BrainScope One, which is used for demonstrations and sometimes used for training.) **Summary:** Currently, if the config file enables pre-recorded EEG playback, but	Defect	Prod-Handheld-Application	minor

Ticket #	Issue	Type	Component	Severity
	the Demo EEG Data Source is set to DAB (Live), if the EEG data connection fails (and the user should power off and back on to fix it), the user will not be informed (as they would be if pre-recorded EEG playback was not enabled). This means that the user won't know that there is a problem with the EEG until they attempt to Start an EEG and it fails to start. **Workaround:** Power the device off and back on to reestablish the EEG data connection.			
800	**Description:** The application may stall when exporting a large amount of log files. **User impact:** Yes **Summary:** The bash script that is used to perform the redaction of PHI and then export of the logs may stall when processing thousands of log files. **Workaround:** The workaround is to avoid exporting more than 1 week of logs at a time.	Defect	Prod-Handheld-Application	minor
859	**Description:** Cognitive Performance assessment may skip a couple of steps of instructions. **User impact:** Yes **Summary:** During the instruction portion of the test the Athlete pressed the button, but the device did not respond. The athlete re-pressed the button. The device was reported to lag behind from when the touch screen button was pressed. After the second depression of the button, the screen advanced two screens. **Workaround:** The workaround is to wait for the Cognitive Performance assessment application to respond, even if it does not respond immediately to the user's touch. If the application skips past the instructions, and the user needs to read them, the device must be powered off to cancel the test. Then it can be restarted and the patient, injury,	Defect	Prod-Handheld-Application	minor

Ticket #	Issue	Type	Component	Severity
	and Cognitive Performance assessment can be reopened.			
907	**Description:** User can enter injury age that is older than patient. **User impact:** Yes **Summary:** The defect will allow the user to enter an injury that occurred before the patient was born, which is nonsensical. **Workaround:** The workaround is to not enter an injury that occurred before the patient was born.	Defect	Prod-Handheld-Application	minor
908	**Description:** Generating a report for a patient whose report is currently or recently opened over USB/SD causes catastrophic error on the PC. **User impact:** Yes **Summary:** Generating a report for a patient whose report is currently or recently opened over USB/SD causes catastrophic error on the PC and makes the report inaccessible - resolvable by unplugging device and regenerating report". **Workaround:** The workaround is to unplug the device, regenerate the report, and then plug the device back in to view it on the PC.	Defect	Prod-Handheld-Application	minor
909	**Description:** Can enter the keyboard and languages settings via the comma key on the keyboard. **User impact:** Yes **Summary:** This may allow access to other menu settings options that are not normally accessible. If you enable the Japanese keyboard, it is not feasible to return to the original keyboard layout. A curious user could accidently render the device poorly usable. **Workaround:** If a user does enable the Japanese keyboard on a device, the workaround is for BrainScope authorized personnel to install an engineering build of the BrainScope One software on the device and use commands to reset the keyboard	Defect	Prod-Handheld-Application	minor

Ticket #	Issue	Type	Component	Severity
	settings back to the default.			
910	**Description:** Can save names to dictionary used by the soft keyboard. **User impact:** Yes **Summary:** User can save words such as a unique patient name to the soft keyboard's dictionary when on the review notes screen. **Workaround:** The workaround is to not save words to the soft keyboard's dictionary.	Defect	Prod-Handheld-Application	minor
911	**Description:** When copying whole Logs folder over a warning in windows 10 said "Unspecified Error". **User impact:** Yes **Summary:** An error may occur when the user attempts to copy the whole Logs folder off of a device. **Workaround:** The workaround is copy portions of the exported log files in smaller subsets, rather than attempting to copy all of the Logs folder at once.	Defect	Prod-Handheld-Application	minor
912	**Description:** Ran an EEG assessment with a negative result and then tried to start Cognitive Performance assessment, but assessment would not start. This did not seem to be present with any other assessments. **User impact:** Yes **Summary:** If this issue occurs, the Cognitive Performance assessment will not start after an EEG assessment was run. **Workaround:** The workaround is to open a different screen, such as Device Settings, then push the Back button to return to the hub, then start the Cognitive Performance assessment.	Defect	Prod-Handheld-Application	minor
913	**Description:** Stability logs are not deleted from system folders on the internal SD card. **User impact:** Yes **Summary:** This ticket is open for either resolving the permission issue or modifying the script to subset the stability logs to the date range for the	Defect	Prod-Handheld-Application	minor

Ticket #	Issue	Type	Component	Severity
	log export selected by the user. **Workaround:** The workaround is to wait extra time for the log export to finish.			
916	**Description:** EEG was automatically canceled on the impedance check screen a few seconds after it was started. **User impact:** Yes **Summary:** When a user cancels EEG session and quickly restarts another EEG session, the EEG may get cancelled. **Workaround:** If the EEG gets canceled, the user will need to start the EEG session again.	Defect	Prod-Handheld-Application	minor
922	**Description:** Remove Patient ID from logs, files, filenames, etc. **User impact:** Yes **Summary:** Patient ID is used in file names of patient data files, encrypted log files, non-encrypted log files, and the PDF report. **Workaround:** The workaround is a caution statement in the user manual and only allowing customers to return log files (not patient files or PDF Report) to BrainScope. Log files returned by customers will be redacted using the BrainScope Decryption and Redaction Tool (BDRT).	Defect	Prod-Handheld-Application	minor

4.5 Release 2.13.3705

Table 15 Version Information on the About Screen

Application	r 2.13.3705
Firmware	2.12.3599
Algorithm	2.0.188
Xloader	2.0.6-B123
Bootloader	2.0.6-B123-6-g6f3e600
Kernel	2.0.5-B122-27-g6e98df6
Recovery	2.0.6-B123-10-gb49b71f
System	2.0.6-131

4.5.1 Build Date: 04-25-2017

4.5.2 Purpose

4.5.2.1 This is a functional SW release of Ahead 300 handheld software for its intended purpose with the listed known issues. The

purpose of the release is for commercial use.

4.5.3   New Features and Issues Resolved in Release 2.13.3705

4.5.3.1 This is considered an official SW release that adds a number of software enhancements and bug fixes.

4.5.3.2 Refer to the following tables for detailed lists of new features and issues resolved in the build.

Table 16 New Features in Release 2.13.3705

Ticket #	Issue	Type	Component	Severity
760	**Description:** Ahead 300: Cognitive Performance software should write to internal storage. **User impact:** Yes **Summary:** The Cognitive Performance software was updated to use internal storage and the Ahead 300 application was updated to work with the Cognitive Performance files in their new location and also allow the user to run a Cognitive Performance assessment even when the external SD Card is not available.	enhancement	Prod-Handheld-Application	minor
787	**Description:** Ahead 300: The capability to select a subset of the logs to export was added. **User impact:** Yes **Summary:** A new Log Export screen was added to allow the user to select 1 day, 1 week, or a date range for the logs that will be exported.	enhancement	Prod-Handheld-Application	minor
788	**Description:** Ahead 300: The performance of PDF report generation was optimized. The layout and content of the PDF Reports was improved. **User impact:** Yes **Summary:** The time it takes to generate PDF reports was reduced. Several improvements to the layout and appearance of the PDF reports were made.	enhancement	Prod-Handheld-Application	minor
796	**Description:** Ahead 300: Patient Report Settings was added in Administrator Settings. The new screen has four toggle switches: Automatically Generate Report.	enhancement	Prod-Handheld-Application	minor

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Ticket #	Issue	Type	Component	Severity
	Include Patient Name in Report. Include Patient DOB in Report. Include Patient Gender in Report. **User impact:** Yes **Summary:** The Patient Report Settings and associated changes to report generation were added.			
797	**Description:** Ahead 300: Most writing to the SD Card was removed. **User impact:** Yes **Summary:** The software will only write to the SD Card when reports are generated or an administrator performs one of the types of data export.	enhancement	Prod-Handheld-Application	minor

Table 17 Resolved Issues in Release 2.13.3705.

Ticket #	Issue	Type	Component	Severity
801	**Description:** Ahead 300: The SCAT3 Full portion of PDF was not filled under some circumstances when sideline is opened in review mode. Note, this problem was introduced during the development of this software release and does not exist in any previous software releases. It was introduced during the development of ticket #788 (optimize PDF report generation), and fixed in this ticket for release of 2.13. **User impact:** Yes **Summary:** The SCAT3 Full portion of the PDF will now be filled out correctly.	defect	Prod-Handheld-Application	minor
802	**Description:** Ahead 300: Patient files are not properly deleted when individual patient is deleted from the Current Patient Injuries List screen. **User impact:** Yes **Summary:** The deletion of patient files has been corrected, so storage space is now properly managed.	defect	Prod-Handheld-Application	minor

4.5.4   Known Issues in Release 2.13.3705

4.5.4.1 Refer to the following table for a detailed list of known issues in

the build. Any known issues with user impact have a workaround

listed.

Table 18 Known Issues in Release 2.13.3705

Ticket #	Issue	Type	Component	Severity
157	**Description:** Display the handheld system clock's time and date more visibly to the user. **User impact:** Yes **Summary:** The Android System Notification Bar is meant to contain the date so that it is available to the user on every screen. The notification bar currently only contains the time and the battery status. **Workaround:** The workaround is to view the About screen, which displays the Handheld Clock's time and date.	Defect	Prod-Handheld-Application	minor
431	**Description:** Empty folders may be created in EEG session folder. **User impact:** Yes **Summary:** Empty folders may be created in EEG session folder. **Workaround:** The workaround is to ignore the empty folders, if any are created.	Defect	Prod-Handheld-Application	minor
592	**Description:** Non-repeatable crash after Cognitive Performance test was completed. **User impact:** Yes **Summary:** Between the Cognitive Performance Test screen and Cognitive Performance Summary Screen the handheld went blank and the Cognitive Performance Summary Screen did not appear. The unit was restarted and the test was tried again successfully. **Workaround:** If the crash occurs, the user will need to restart the device and repeat the Cognitive Performance test.	Defect	Prod-Handheld-Application	minor
699	**Description:** Night mode option that will darken all screens used in a military environment. **User impact:** Yes **Summary:** The application software should allow the user to select a night	Defect	Prod-Handheld-Application	minor

Ticket #	Issue	Type	Component	Severity
	mode option that will darken all screens used in a military environment (general screens, EEG, and MACE). **Workaround:** Set the brightness to the lowest level on the Device Settings screen.			
723	**Description:** About screen should show Date of Manufacturing (final assembly of EEG Acquisition Unit). **User impact:** Yes **Summary:** About screen should show Date of Manufacturing (final assembly of EEG Acquisition Unit). **Workaround:** The Ahead 300 EEG Acquisition Unit Label contains the date of manufacturing, so the information is already readily accessible.	Defect	Prod-Handheld-Application	minor
744	**Description:** SD Card Error Message often appears after re-boot. **User impact:** Yes **Summary:** After rebooting the device either through the power off menu or within Recovery mode after applying a handheld update, when the application re-loads the SD Card Error Message is often displayed. **Workaround:** The user can continue using the device by selecting "Continue without SD Card" on the SD Card Error Message or rebooting the device again.	Defect	Prod-Handheld-Application	minor
746	**Description:** Improve timing when loading the patient and assessment lists. **User impact:** Yes **Summary:** Loading of the patient list and all assessments for a patient takes about 10 seconds. The software requirements call for this to take less than 5 seconds. **Workaround:** The workaround is to wait for a few extra seconds.	Defect	Prod-Handheld-Application	minor
747	**Description:** Improve log file export functionality. **User impact:** Yes **Summary:** It was found that it takes a very long time to view all exported log	Defect	Prod-Handheld-Application	minor

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Ticket #	Issue	Type	Component	Severity
	files over MTP when a large amount of files are present. The log files are only used for debugging purposes, and the files do appear over MTP after a few hours. **Workaround:** The workaround is to wait for them to appear. In addition, the most recent ten log files are saved directly to external storage in the "Config" folder at every boot, so the needed log files may already be present in the BrainScope Config folder on the external SD Card.			
800	**Description:** The application may stall when exporting a large amount of log files. **User impact:** Yes **Summary:** The device will store about 700 MB of log files in internal storage. This will be about 10,000 files. The export of the logs may stall when processing thousands of log files. **Workaround:** The workaround is to avoid exporting more than 1 week of logs at a time.	Defect	Prod-Handheld-Application	minor
803	**Description:** A crash was found when pressing the search button on a locked screen (when the display is turned off by pressing the power button). **User impact:** Yes **Summary:** A crash occurred. **Workaround:** The workaround is to avoid pressing the search button on a locked screen (when the display is turned off by pressing the power button).	Defect	Prod-Handheld-Application	minor
804	**Description:** A crash was found when pressing the back button multiple times during EEG Data Review. **User impact:** Yes **Summary:** A crash occurred. **Workaround:** The workaround is avoid pressing the back button multiple times during EEG Data Review.	Defect	Prod-Handheld-Application	minor
805	**Description:** A crash was found when "OK" was pressed on the message	Defect	Prod-Handheld-Application	minor

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Ticket #	Issue	Type	Component	Severity
	indicating that not enough clean data was collected during the session. The pop-up was displayed for about 2 minutes before the tester pressed "OK". **User impact:** Yes **Summary:** A crash occurred. **Workaround:** The workaround is re-open the patient and injury after the application restarts. When insufficient EEG data was collected, the user will need to repeat the EEG test, regardless of whether the crash occurs.			
806	**Description:** A crash was found when pressing the power button to turn the display off during an EEG session. **User impact:** Yes **Summary:** A crash occurred. **Workaround:** The workaround is avoid pressing the power button to turn the display off during an EEG session. Note, turning off the display, which puts the device to sleep and powers off the DAB, during EEG session should be avoided, because EEG will not be collected while the display is off.	Defect	Prod-Handheld-Application	minor
807	**Description:** The EEG Start button was pressed, but the application did not advance to the Impedance screen. On the Hub, all Start buttons were disabled. This occurs very rarely. **User impact:** Yes **Summary:** The EEG Start button was locked and the EEG failed to start. **Workaround:** The workaround is leave the hub screen and then return to it, which resets all the Start buttons. This can be done by opening the Device Settings screen, then backing out of it to return to the hub.	Defect	Prod-Handheld-Application	minor
808	**Description:** The "EEG connection re-established" message appeared spuriously throughout testing and "EEG Connection Failed" message appeared after completing a cognitive performance assessment. **User impact:** Yes	Defect	Prod-Handheld-Application	minor

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Ticket #	Issue	Type	Component	Severity
	Summary: Spurious EEG connection messages and an EEG Connection failed message appeared. **Workaround:** The workaround is to ignore the spurious pop-up messages about the EEG connection, and proceed with operating the device. If the EEG Connection Failed message appears and is not automatically dismissed after a few seconds, the user may need to power the device off and back on to reset the EEG Connection before conducting an EEG.			

4.6 Release 2.12.3615

Table 19 Version Information on the About Screen

Application	r 2.12.3615
Firmware	2.12.3599
Algorithm	2.0.188
Xloader	2.0.6-B123
Bootloader	2.0.6-B123-6-g6f3e600
Kernel	2.0.5-B122-27-g6e98df6
Recovery	2.0.6-B123-10-gb49b71f
System	2.0.6-131

4.6.1 Build Date: 03-30-2017

4.6.2 Purpose

4.6.2.1 This is a functional SW release of Ahead 300 handheld and DAB software for its intended purpose with the listed known issues. The purpose of the release is for commercial use.

4.6.3 New Features and Issues Resolved in Release 2.12.3615

4.6.3.1 This is considered an official SW release that adds a number of software enhancements.

4.6.3.2 There were no issues with user impact resolved in this build.

4.6.3.3 Refer to the following tables for detailed lists of new features in the build.

Table 20 New Features in Release 2.12.3615

Ticket #	Issue	Type	Component	Severity

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Ticket #	Issue	Type	Component	Severity
775	**Description:** Ahead 300: The application should warn the user that the date and time may be incorrect if the DAB RTC battery has died. **User impact:** Yes **Summary:** A popup was added to warn the user that the date and time may be incorrect.	enhancement	Prod-Handheld-Application	minor
776	**Description:** Ahead 300: The application should log the DAB RTC battery level. **User impact:** Yes **Summary:** The software was updated to log the DAB RTC battery level in the Device Log and the encrypted debug logs.	enhancement	Prod-Handheld-Application	minor
783	**Description:** Ahead 300: update USB VID/PIDs and parameters to use BrainScope defined values. **User impact:** Yes **Summary:** The handheld USB device information was updated to BrainScope values so that users can whitelist the Ahead 300 as a USB device for connecting to their computer.	enhancement	Prod-Handheld-Application	minor

4.6.4   Known Issues in Release 2.12.3615

4.6.4.1 Refer to the following table for a detailed list of known issues in the build. Any known issues with user impact have a workaround listed.

Table 21 Known Issues in Release 2.12.3615

Ticket #	Issue	Type	Component	Severity
157	**Description:** Display the handheld system clock's time and date more visibly to the user. **User impact:** Yes **Summary:** The Android System Notification Bar is meant to contain the date so that it is available to the user on every screen. The notification bar currently only contains the time and the battery status. **Workaround:** The workaround is to	Defect	Prod-Handheld-Application	minor

Ticket #	Issue	Type	Component	Severity
	view the About screen, which displays the Handheld Clock's time and date.			
431	**Description:** Empty folders may be created in EEG session folder. **User impact:** Yes **Summary:** Empty folders may be created in EEG session folder. **Workaround:** The workaround is to ignore the empty folders, if any are created.	Defect	Prod-Handheld-Application	minor
592	**Description:** Non-repeatable crash after Cognitive Performance test was completed. **User impact:** Yes **Summary:** Between the Cognitive Performance Test screen and Cognitive Performance Summary Screen the handheld went blank and the Cognitive Performance Summary Screen did not appear. The unit was restarted and the test was tried again successfully. **Workaround:** If the crash occurs, the user will need to restart the device and repeat the Cognitive Performance test.	Defect	Prod-Handheld-Application	minor
699	**Description:** Night mode option that will darken all screens used in a military environment. **User impact:** Yes **Summary:** The application software should allow the user to select a night mode option that will darken all screens used in a military environment (general screens, EEG, and MACE). **Workaround:** Set the brightness to the lowest level on the Device Settings screen.	Defect	Prod-Handheld-Application	minor
723	**Description:** About screen should show Date of Manufacturing (final assembly of EEG Acquisition Unit). **User impact:** Yes **Summary:** About screen should show Date of Manufacturing (final assembly of EEG Acquisition Unit). **Workaround:** The Ahead 300 EEG Acquisition Unit Label contains the date of manufacturing, so the information is	Defect	Prod-Handheld-Application	minor

Ticket #	Issue	Type	Component	Severity
	already readily accessible.			
744	**Description:** SD Card Error Message often appears after re-boot. **User impact:** Yes **Summary:** After rebooting the device either through the power off menu or within Recovery mode after applying a handheld update, when the application re-loads the SD Card Error Message is often displayed. **Workaround:** The user can continue using the device by selecting "Continue without SD Card" on the SD Card Error Message or rebooting the device again.	Defect	Prod-Handheld-Application	minor
746	**Description:** Improve timing when loading the patient and assessment lists. **User impact:** Yes **Summary:** Loading of the patient list and all assessments for a patient takes about 10 seconds. The software requirements call for this to take less than 5 seconds. **Workaround:** The workaround is to wait for a few extra seconds.	Defect	Prod-Handheld-Application	minor
747	**Description:** Improve log file export functionality. **User impact:** Yes **Summary:** It was found that it takes a very long time to view all exported log files over MTP when a large amount of files are present. The log files are only used for debugging purposes, and the files do appear over MTP after a few hours. **Workaround:** The workaround is to wait for them to appear. In addition, the most recent ten log files are saved directly to external storage in the "Config" folder at every boot, so the needed log files may already be present in the BrainScope Config folder on the external SD Card.	Defect	Prod-Handheld-Application	minor

4.7 Release 2.11.3520

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Table 22 Version Information on the About Screen

Application	r 2.11.3520
Firmware	2.11.3457
Algorithm	2.0.188
Xloader	2.0.6-B123
Bootloader	2.0.6-B123-6-g6f3e600
Kernel	2.0.5-B122-27-g6e98df6
Recovery	2.0.6-B123-10-gb49b71f
System	2.0.6-131

4.7.1   Build Date: 02-24-2017

4.7.2   Purpose

4.7.2.1 The purpose of the release is for commercial use.

4.7.3   New Features and Issues Resolved in Release 2.11.3520

4.7.3.1 Software Release 2.11.3520 contains modest updates from Ahead 300 Software Release 2.11.3472. The release contains an update fixing the display of the Cognitive Performance Assessment detailed results.

4.7.3.2 No new features were added in this release. Refer to the following table for a detailed list of issues resolved in the build.

Table 23 Resolved Issues in Release 2.11.3520.

Ticket #	Issue	Type	Component	Severity
766	**Description:** Ahead 300: Cognitive Performance results display issue. **User impact:** Yes **Summary:** The code was modified to display the correct data in the Score column of both Complex Reaction Time and Match to Sample on the Cognitive Performance results screens. Additionally the labels for the detailed results tables were corrected from "Mean" to "Mean RT" to match the labels on the bar graphs above the detailed results tables.	defect	Prod-Handheld-Application	minor

4.7.4   Known Issues in Release 2.11.3520

4.7.4.1 Refer to the following table for a detailed list of known issues in R2.11 with work around included.

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Table 24 Known Issues in Release 2.11.3520

Ticket #	Issue	Type	Component	Severity
157	**Description:** Display the handheld system clock's time and date more visibly to the user. **User impact:** Yes **Summary:** The Android System Notification Bar is meant to contain the date so that it is available to the user on every screen. The notification bar currently only contains the time and the battery status. **Workaround:** The workaround is to view the About screen, which displays the Handheld Clock's time and date.	Defect	Prod-Handheld-Application	minor
431	**Description:** Empty folders may be created in EEG session folder. **User impact:** Yes **Summary:** Empty folders may be created in EEG session folder. **Workaround:** The workaround is to ignore the empty folders, if any are created.	Defect	Prod-Handheld-Application	minor
592	**Description:** Non-repeatable crash after Cognitive Performance test was completed. **User impact:** Yes **Summary:** Between the Cognitive Performance Test screen and Cognitive Performance Summary Screen the handheld went blank and the Cognitive Performance Summary Screen did not appear. The unit was restarted and the test was tried again successfully. **Workaround:** If the crash occurs, the user will need to restart the device and repeat the Cognitive Performance test.	Defect	Prod-Handheld-Application	minor
699	**Description:** Night mode option that will darken all screens used in a military environment. **User impact:** Yes **Summary:** The application software should allow the user to select a night mode option that will darken all screens used in a military environment (general screens, EEG, and MACE). **Workaround:** Set the brightness to the	Defect	Prod-Handheld-Application	minor

Ticket #	Issue	Type	Component	Severity
	lowest level on the Device Settings screen.			
723	**Description:** About screen should show Date of Manufacturing (final assembly of EEG Acquisition Unit). **User impact:** Yes **Summary:** About screen should show Date of Manufacturing (final assembly of EEG Acquisition Unit). **Workaround:** The Ahead 300 EEG Acquisition Unit Label contains the date of manufacturing, so the information is already readily accessible.	Defect	Prod-Handheld-Application	minor
744	**Description:** SD Card Error Message often appears after re-boot. **User impact:** Yes **Summary:** After rebooting the device either through the power off menu or within Recovery mode after applying a handheld update, when the application re-loads the SD Card Error Message is often displayed. **Workaround:** The user can continue using the device by selecting "Continue without SD Card" on the SD Card Error Message or rebooting the device again.	Defect	Prod-Handheld-Application	minor
746	**Description:** Improve timing when loading the patient and assessment lists. **User impact:** Yes **Summary:** Loading of the patient list and all assessments for a patient takes about 10 seconds. The software requirements call for this to take less than 5 seconds. **Workaround:** The workaround is to wait for a few extra seconds.	Defect	Prod-Handheld-Application	minor
747	**Description:** Improve log file export functionality. **User impact:** Yes **Summary:** It was found that it takes a very long time to view all exported log files over MTP when a large amount of files are present. The log files are only used for debugging purposes, and the files do appear over MTP after a few	Defect	Prod-Handheld-Application	minor

Ticket #	Issue	Type	Component	Severity
	hours. **Workaround:** The workaround is to wait for them to appear. In addition, the most recent ten log files are saved directly to external storage in the "Config" folder at every boot, so the needed log files may already be present in the BrainScope Config folder on the external SD Card.			

4.8   Release 2.11.3472

Table 25 Version Information on the About Screen

Application	r 2.11.3472
Firmware	2.11.3457
Algorithm	2.0.188
Xloader	2.0.6-B123
Bootloader	2.0.6-B123-6-g6f3e600
Kernel	2.0.5-B122-27-g6e98df6
Recovery	2.0.6-B123-10-gb49b71f
System	2.0.6-131

4.8.1   Build Date: 02-03-2017

4.8.2   Purpose

4.8.2.1 The purpose of the release is for commercial use.

4.8.3   New Features and Issues Resolved in Release 2.11.3472

4.8.3.1 This is the first commercial release of the Ahead 300 software, therefore the lists of "new features" and "issues resolved" will be included beginning with the next Ahead 300 software release.

4.8.4   Known Issues in Release 2.11.3472

4.8.4.1 Refer to the following table for a detailed list of known issues in R2.11 with work around included.

Table 26 Known Issues in Release 2.11.3472

Ticket #	Issue	Type	Component	Severity
157	**Description:** Display the handheld system clock's time and date more visibly to the user. **User impact:** Yes **Summary:** The Android System Notification Bar is meant to contain the date so that it is available to the user on	Defect	Prod-Handheld-Application	minor

Ticket #	Issue	Type	Component	Severity
	every screen. The notification bar currently only contains the time and the battery status. **Workaround:** The workaround is to view the About screen, which displays the Handheld Clock's time and date.			
431	**Description:** Empty folders may be created in EEG session folder. **User impact:** Yes **Summary:** Empty folders may be created in EEG session folder. **Workaround:** The workaround is to ignore the empty folders, if any are created.	Defect	Prod-Handheld-Application	minor
592	**Description:** Non-repeatable crash after Cognitive Performance test was completed. **User impact:** Yes **Summary:** Between the Cognitive Performance Test screen and Cognitive Performance Summary Screen the handheld went blank and the Cognitive Performance Summary Screen did not appear. The unit was restarted and the test was tried again successfully. **Workaround:** If the crash occurs, the user will need to restart the device and repeat the Cognitive Performance test.	Defect	Prod-Handheld-Application	minor
699	**Description:** Night mode option that will darken all screens used in a military environment. **User impact:** Yes **Summary:** The application software should allow the user to select a night mode option that will darken all screens used in a military environment (general screens, EEG, and MACE). **Workaround:** Set the brightness to the lowest level on the Device Settings screen.	Defect	Prod-Handheld-Application	minor
723	**Description:** About screen should show Date of Manufacturing (final assembly of EEG Acquisition Unit). **User impact:** Yes **Summary:** About screen should show Date of Manufacturing (final assembly	Defect	Prod-Handheld-Application	minor

Ticket #	Issue	Type	Component	Severity
	of EEG Acquisition Unit). **Workaround:** The Ahead 300 EEG Acquisition Unit Label contains the date of manufacturing, so the information is already readily accessible.			
744	**Description:** SD Card Error Message often appears after re-boot. **User impact:** Yes **Summary:** After rebooting the device either through the power off menu or within Recovery mode after applying a handheld update, when the application re-loads the SD Card Error Message is often displayed. **Workaround:** The user can continue using the device by selecting "Continue without SD Card" on the SD Card Error Message or rebooting the device again.	Defect	Prod-Handheld-Application	minor
746	**Description:** Improve timing when loading the patient and assessment lists. **User impact:** Yes **Summary:** Loading of the patient list and all assessments for a patient takes about 10 seconds. The software requirements call for this to take less than 5 seconds. **Workaround:** The workaround is to wait for a few extra seconds.	Defect	Prod-Handheld-Application	minor
747	**Description:** Improve log file export functionality. **User impact:** Yes **Summary:** It was found that it takes a very long time to view all exported log files over MTP when a large amount of files are present. The log files are only used for debugging purposes, and the files do appear over MTP after a few hours. **Workaround:** The workaround is to wait for them to appear. In addition, the most recent ten log files are saved directly to external storage in the "Config" folder at every boot, so the needed log files may already be present in the BrainScope Config folder on the	Defect	Prod-Handheld-Application	minor

Ticket #	Issue	Type	Component	Severity
	external SD Card.			