

TacticID-1064/ST software Release Notes

Date of Release 3/15/2023

This release note details the changes to the following software products for the TacticID-1064 and TacticID-1064ST handheld Raman products:

TOS-1064 version 2.01.222.0 over 2.01.214.0.

Installation and Update Instruction

For installation, please follow the standard TID EX software installation guide.

For software upgrade, please follow the TacticID-1064ST Quick Update Guide

Software/Library Compatibility Chart

Software/library	TOS-1064 2.01.214.0	TOS-1064 2.01.222.0
TID EX 2.01.77.9	Compatible	Not Compatible
TID EX 2.01.77.22	Not Compatible	Compatible
Library X0.xx	Compatible	Not Compatible
Illicit and General Chemical	Not Compatible	Compatible

Key Changes in TOS-1064:

1. Changed the name of the default preset from "Default" to "Standard".
2. Changed font color to white when text is in red background for better viewing.
3. Changed the default software Spectral Range to 176 to 2000 in all normal mode/mixture/ST operation preset.
4. Added expiration setting for performance validation date.
5. Added capability user to delete user operation preset and user library.
6. Added Narcotics Operation Preset and show it up only when illicit library is installed.
7. Removed BWTEK prefix from library name.
8. Removed CNESP, CNSP, CNS, and DRG from the device if ever installed and set Illicit library as default when applicable.
9. Improve GUI that scan delay text (after enable scan delay, press scan) will exceed the screen in Polish.
10. Improve GUI that match/no match text will exceed the box length in some languages.

11. Fix the bug that export data range may not be 176-2500 cm⁻¹.

Key Changes in TID EX:

1. Updated database schema to support performance validation expiration.
2. Fixed the bug that when installing software it shows unknown publisher.
3. Improve GUI in report about legend display.
4. Remove BWTEK prefix from library name.

TacticID-1064 TOS-1064 software version 2.01.214.0 Release Notes

Date of Release: 11/17/2021

This release note details the changes to the following software products:

- TOS-1064 software version 2.01.214.0 over the previous version 2.01.159.0

This release note applies to both TacticID-1064 and TacticID-1064 ST units. TacticID-1064 ST uses the same software package. The ST functionality can be enabled at Factory only.

Installation and Update Instruction

For software upgrade, please follow the TacticID-1064 Quick Update Guide (Doc# 290020426) or contact B&W Tek support at BWTek.com/support/. For product upgrade from TacticID-1064 to TacticID-1064 ST, please contact B&W Tek Support.

Update of TOS-1064 from version 2.01.159.0 can be done without additional license. Starting from software version 2.01.214.0, updating software to a future version or updating libraries will require a valid license. Please contact your local representative to obtain the proper license.

Current users without license can continue to perform all functions in the software without issue. The license feature will only affect software and library updates.

Software/Library Compatibility Chart

Software/library versions	TOS-1064 2.01.159.0	TOS-1064 2.01.214.0
TID EX 2.01.77.9	Compatible	Compatible
Library X0.40C	Compatible	Compatible
Library X0.60B	Compatible	Compatible
Library X0.80B	Compatible	Compatible
BSP Version 2_A	Compatible	Compatible
BSP Version 5_A	Not Compatible	Compatible

Key Changes in TOS-1064:

1. Added license control function for software update, library update and Factory configuration enabled through license management. If the user's device is within warranty, user can contact B&W Tek or your local distributor for proper license to install;
2. Added Performance records in History; performance records cannot be deleted on the device. The scan history is cleared after user synchronizes the device to TID EX or TID21. User can now export performance validation records directly using the OTG function without connecting to a PC.
3. Added mixture screening function under Measurement. Mixture screening sets a threshold of the HQI that triggers the manual or automatic mixture analysis.
4. Added mixture analysis enabling/disabling switch for all users under Measurement.
5. Added a performance tracking mode in Measurement. ADMIN users can turn on/off mandatory performance validation scan before each sample scan.
6. Added dual axis display of spectra in the exported report through OTG.
7. Changed the minimum HQI to 70 and number of hits to 1 for both Normal mode and ST mode default operation preset.
8. Added two new Factory pre-configured operation presets: "Narcotics" and "Hazmat" under the Normal mode settings and Mixture settings.
9. Updated the company logo image when the device is initialized.
10. Improved automatic integration time algorithm.
11. Fixed the bug that the Yes and No prompt message is reversed in German.
12. Fixed the bug that the detailed chemical classification and background colors from user-created library were not always synchronized correctly to TID EX.
13. Fixed a bug that the scan index of a newly created performance validation reference file might not be correct.
14. Added support to the new firmware version 5_A.

TacticID-1064 TOS-1064 software version 2.01.159.0, library version X0.60C
and PC software TID EX Version 2.01.77.9
Release Notes

Date of Release: 07/10/2020

This release note details the changes to the following software products:

- TOS-1064 software version 2.01.159.0 over the previous version 2.01.146.0
- TID EX version 2.01.77.9 over the previous version 2.01.77.7.
- Library version X0.60C over the previous version X0.40C.

This release note applies to both TacticID-1064 and TacticID-1064 ST units. TacticID-1064 ST uses the same software package. The ST functionality can be enabled at Factory only.

Installation and Update Instruction

For installation, please follow the standard TID EX software installation guide

For software upgrade, please follow the TacticID-1064 Quick Update Guide (Doc# 290020426) or contact B&W Tek support at BWTek.com/support/. For product upgrade from TacticID-1064 to TacticID-1064 ST, please contact B&W Tek Support.

Software/Library Compatibility Chart

Software/library versions	TOS-1064 1.01.65.2	TOS-1064 2.01.146.0	TOS-1064 2.01.159.0
TID EX 1.01.20.33	Compatible	Not compatible	Not compatible
TID EX 2.01.77.7	Not compatible	Compatible	Not compatible
TID EX 2.01.77.9	Not compatible	Compatible	Compatible
Library X0.20F	Compatible	Not compatible	Not compatible
Library X0.40C	Not compatible	Compatible	Compatible
Library X0.60C	Not compatible	Compatible	Compatible

Comparison chart between TacticID-1064 software and TacticID-1064 ST software

Features	TacticID-1064	TacticID-1064 ST
Software versions and main functionalities (TOS-1064, Library, TID EX)	Same	Same
Device Type	1064	ST
ST functionality	Not available	Available
Display laser power in mW	Available	Not available

Key Changes in TOS-1064:

1. The first user-defined-field is defined as barcode input. When UDF is enabled, user can long hold the right arrow key to enable barcode scan at the scan screen.
2. Laser power adjustment by mW now has interval of 5mW instead of 4.2mW. When the device is configured to support ST functions, Laser power can be displayed and adjusted in 1% increment but cannot be displayed and adjusted in mW.
3. Changed threshold of spectrum height from 40000-60000 counts to 30000-60000 counts.
4. Fixed the bug that the exported spc data through OTG has wrong format.
5. Fixed the bug that library version is not displayed correctly.
6. ST mode is available for TacticID-1064 ST users. For detailed ST functionality, please refer to the user manual.

Key Changes in TID EX:

1. TID EX now supports ST scans. TacticID-1064 ST users are able to search ST mode records and export data and generate reports.
2. Idle time when connecting TacticID-1064 devices to TID EX is now set as 15 minutes.
3. Integration time value is now added to Performance validation report.
4. Multiple languages are updated. Currently there is support for the following 11 languages: English, Simplified Chinese, Traditional Chinese, Spanish, French, Japanese, Korean, German, Polish, Vietnamese, and Turkish. Please refer to the Multiple language support note for details.

Key Changes in Library:

1. Added 3,000 spectra to TPJ library, please refer to TacticID-1064 Complete Library Listing X0.60 (Doc#400000267) for details.
2. Added library translations for chemical names and synonyms for Korean, Japanese, and Vietnamese languages.
3. Updated Traditional Chinese chemical names and synonyms.
4. Corrected CAS#s for ketamine HCl and methamphetamine HCl.
5. Removed 290 spectra from D mixture library to achieve more focused mixture analysis for narcotics; please refer to TacticID-1064 BWTek_D library listing X0.60 (Doc#400000341) for details.
6. Removed these spectra from CNESP library:
 - Griess reagent
 - MDE (duplicate)
 - 3,4-dimethylmethcathinone (duplicate)
 - starch soluble (duplicate)
 - wheat flour type 405
7. Added these spectra to CNESP library:
 - polysulfone
 - polyphenylene sulfide
 - polypropylene-glass filled
 - nylon-type 66-%33 Glass
8. Corrected spelling of sufentanil

Known Issues

1. In the TOS-1064 software installed with X0.60B library, it takes user up to 2 minutes to load the view of the TPJ library content. This long waiting time does not affect the general use of the library, such as viewing the chemical details, search, and using the library for HQI and mixture analysis. However, we strongly suggest users to use TID EX to view the TPJ library instead of using the TOS-1064 software.
2. In both TOS-1064 and TID EX, when viewing the library content with a non-English language as the system language, the library spectra names will still remain in English. This issue does not affect user's identification and report. The chemical names and information in the hit result and report will be displayed with the local language.

TacticID-1064 PC software TID EX Version 2.01.77.7 Release Notes

Date of Release: 03/05/2020

This release note details the changes to the following area:

TID EX version 2.01.77.7 over the previous version 2.01.77.5. TID EX 2.01.77.5 will be replaced with TID EX 2.01.77.7 immediately.

Installation and Update Instruction

For installation, please follow the standard TID EX software installation guide

For software upgrade, please follow the TacticID-1064 quick upgrade guide or contact BWTEK support at BWTEK.com/support/

Key Changes in TID EX:

1. Fixed the bug where the TID EX software will change the windows regional format and cause CSV files read error in Microsoft Excel.
2. Fixed the idle time error when connecting TOS-1064 to TID EX. Idle time for TOS-1064 device login is now set as 5 minutes.
3. All other functionalities stay the same as given by the release note below. No new functions are being introduced.

Compatibility Chart

Software/library versions	TOS-1064 1.01.65.2	TOS-1064 2.01.146.0
TID EX 1.01.20.33	Compatible	Not compatible
TID EX 2.01.77.7	Not compatible	Compatible
Library X0.20F	Compatible	Not compatible
Library X0.40C	Not compatible	Compatible

TacticID-1064 Operating System TOS Version 2.01.146.0
TacticID-1064 PC software TID EX Version 2.01.77.5
Release Notes

Date of Release: 02/15/2020

This document provides release notes for software and library releases supporting the TacticID-1064 handheld Raman spectrometer. This release note details the changes to the following areas:

- TOS-1064 versions 2.01.146.0 over the previously released versions of 1.01.65.2.
- TID EX versions 2.01.77.5 over the previously released version of 1.01.20.33

We recommend users to use English (United States) as the windows operation system format for any TID EX installations and upgrades. There might be problems with TID EX due to users' local computer configuration.

Installation and Update Instruction

1. Make sure the current TOS-1064 version on the device is 1.01.65.2 and TID EX version installed on the computer is 1.01.20.33;
2. Connect and log in your device in TID EX;
3. Upgrade TOS-1064 version to 2.01.146.0; device reboot is required;
4. Log in to the TacticID-1064 device and verify that TOS-1064 version is updated;
5. Uninstall both TID EX Client and TID EX Server installed on this computer.
6. Install the new TID EX 2.01.77.5 (refer to installation manual for guidance)
7. Log in TID EX as IT ADMIN with default password 999999
8. Go to Service Setup, click Create/Update Database, wait for the successful message.
9. Click Stop Service, wait for the successful message
10. Click Start Service, wait for the successful message
11. Update the entire TOS-1064 library (CNESP, D, TPJ) using the OTG function or through TID EX. The old library is not compatible with the new software.
12. Restart the TacticID-1064 unit after each upload.
13. Once the TacticID-1064 is upgraded, it cannot be downgraded to previous versions.

Compatibility Chart

Software/library versions	TOS-1064 1.01.65.2	TOS-1064 2.01.146.0
TID EX 1.01.20.33	Compatible	Not compatible
TID EX 2.01.77.5	Not compatible	Compatible
Library X0.20F	Compatible	Not compatible
Library X0.40C	Not compatible	Compatible

Key Changes in TOS-1064:

1. Expanded the OTG functionality

- Users can directly upgrade the TOS system and library through an external USB drive;
- Users can directly export both the spectral data in spc and csv format and the scan report in pdf to an external USB drive;
- Users can now import spectra from external USB drive to user-created libraries without connecting to a PC;

2. Enhanced the customization ability of the device during scans

- Added the capability of using manual integration time for each scan;
- Added the option to adjust the laser power in either percentage or mW;
- Added the capability that laser power can be adjusted with 1% increments (equal to 4.2mW)
- Add the function of User Defined Field inputs which enables the user to add pre-defined measurement information before scans, such as "Location" or "Sample Information", "Case Number", "Badge Number", "Precinct", etc, in addition to the Notes and Camera functions. These new annotations will be reflected in the scan report;
- Add capability of enabling automatic mixture analysis;
- Increased the scan delay set-range to up to 10 minutes;

3. Improved User interface

- Added the capability that the user can view and search library content directly on the device;
- Added the capability of editing chemical basic information of user-created library on the device;
- Added the capability that the user can select a specific library signature to add to the results page for spectra overlay;
- Clicking the spectrum display icon of each result will show spectra comparison of measured scan and signature of this chemical;

- e. Clicking spectrum display icon in Mixture Result will show the overlay of all hit chemicals in different color versus the spectrum of measured scan;
 - f. Changed the display in the results screen, so that each matched chemical name will have its own background color in the associated line instead of using the background color of first matched item for the entire result region;
 - g. Improve battery reading and display to be more accurate;
- 4. Improved scan algorithm and mixture analysis algorithm**
- a. Update the algorithm of automatic integration time definition to reduce total measurement time and improve the signal to noise level;
 - b. Updated Mixture algorithm with a specific library to enhance the capability of discovering more candidates, and improved identification of narcotics in mixtures.
- 5. Upgraded system diagnosis function**
- a. Add capability of automatic system calibration if performance validation fails if the Raman shift variation is slightly out of specification;
- 6. Operation Feature Changes**
- a. Update definition of HB operation mode; now in HB mode touchscreen will not respond;
 - b. In Operation Preset, the default setting cannot be overwritten;
 - c. Changed the menu layout. The Device section in Setup is now under Measurement.
- 7. Bug Fixes**
- a. Fix the bug that scan is hanging at 2% normally if spectrometer initialization fails;
 - b. Fix the bug that sleep mode may take effect if analyzing takes too much time;
 - c. Improve the mechanism of updating instrument parameters to minimize the possibility of system freezing;
- 8. This software release supports the display and input of English, Spanish, French, Simplified Chinese, Traditional Chinese, Korean, Japanese, German, Polish, Turkish and Vietnamese.**

Key changes in TID EX:

- 1. Client and Server programs are now consolidated into one installation package and one interface;
- 2. Server configuration for MySQL database and other network settings are now under IT password protection;
- 3. Library transfer and import are available in this release;
- 4. Add capability for the user to view chemical safety info from TID;
- 5. The interface of the Library menu is re-designed;
- 6. Add Utility menu to support format converting from different region definition to US standard.

Key changes in Library:

Library Content

1. Total spectra counts:
 - TacticID-1064 standard library configuration X0.40_C_95: 10,291
 - TPJ library: 9,000
 - CNESP: 1,291
 - New Library D: 647
2. Added BWTEK_D library specifically targeting narcotic identifications and mixture analysis.
3. Change to CNESP library

#	Classification	Details
1	[NEW]	Add 34 spectra to BWTEK_CNESP library, items are listed below: 1. SDB-006 2. baclofen 3. butenafine HCl 4. alpha-PPP HCl 5. 2-MAPB HCl 6. 3,4-methylenedioxy-N-propylcathinone HCl 7. 3',4'-tetramethylene-alpha-PVP HCl 8. 4-chloro pentedrone HCl 9. 4-chloro-alpha-PVP HCl 10. 4-fluoro-alpha-PHP HCl 11. 4-methyl pentedrone HCl 12. 6-bromo-MDMA HCl 13. 6-chloro-MDMA HCl 14. AKB48 N-(4-fluorobenzyl) analog 15. N-ethyl hexedrone HCl 16. deschloroketamine HCl 17. FUBIMINA 18. mexedrone HCl 19. 3-fluoroamphetamine HCl 20. 3-fluoromethamphetamine HCl 21. 4'-chloro-alpha-PPP HCl 22. 5-MAPB HCl 23. RCS-4 24. bk-MDDMA HCl 25. 3-methyl thiofentanyl HCl 26. alpha-methyl thiofentanyl HCl 27. ADB-PINACA 28. MT-45 HCl 29. lisdexamfetamine (mesylate)

		30. 5-fluoro PB-22 31. tetrahydrofuran fentanyl HCl 32. alpha-PBP HCl 33. alpha-methyl acetyl fentanyl HCl 34. magnesium stearate
2	[REMOVE]	Remove 13 spectra from BWTek_CNESP library, items are listed below: 1. polyphenylene sulfide 2. nylon alloy 3. nylon-type 66-%33 glass 4. polypropylene-glass filled 5. polysulfone 6. (+)-methamphetamine (duplicate) 7. l-methamphetamine (duplicate) 8. metformin HCl (duplicate) 9. methcathinone HCl 10. methylone HCl 11. cimetidine HCl 12. paper 13. 2-pyrrolidinopropiophenone HCl (duplicate)
3	[UPDATE]	Various updates for spectra names and synonyms (for clarification), correction of formulas and CAS#s for BWTek_CNESP and BWTek_TPJ libraries.