



# Charleston County Sheriff's Office Policy and Procedures Manual

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**Sheriff Carl Ritchie**

## 15-03 INTEGRATED BALLISTIC IDENTIFICATION SYSTEM

- NEW
- REVISED
- REVIEWED

ACA Standards Reference: N/A  
CALEA Standards Reference: N/A  
NCCHC Standards Reference: N/A  
SCLEA Standards Reference: N/A  
SC Minimum Standards: N/A

*This policy dated 1/30/2025 replaces prior policies cited above and supersedes all previously issued directives.*

I. Purpose:

The Integrated Ballistic Identification System (IBIS) and its network, the National Integrated Ballistics Identification Network (NIBIN), provides the Charleston County Sheriff's Office (CCSO) with the ability to use digital computer images of ballistic evidence and work product (i.e., test fired cartridge casings) to assist with the growing number of firearm related crimes in the Charleston area, or for any other agency approved by the Sheriff or designee. A Memorandum of Understanding exists between the U.S. Department of the Treasury, Bureau of Alcohol, Tobacco, Firearms, and Explosives (ATF), as system owner, and the CCSO, as system operator. This policy establishes the proper procedures for utilizing the IBIS system in accordance with the standards set forth by the ATF Minimum Required Operating Standards (MROS).

II. Policy:

Property (i.e., firearms, recovered cartridge casings) will be transferred to the IBIS technician for the purpose of analysis, entry, and/or test fire. Test fired casings will be retained as work product in the Forensic Services Unit (FSU) or notification will be made to the submitting agency for retrieval. Firearms will be secured in their designated storage area in the FSU evidence storage space. Recovered cartridge casings will be stored according to evidence storage procedures.

III. Definitions:

A. For purposes of this procedure, the word "deputy" applies to all agency employees with a certification classification of Class I, Class II, Class III, or Reserve Deputy, as defined by the South Carolina Criminal Justice Academy.

The following terms are used interchangeably; however, they carry guidance to specific employees based on usage of the term:

1. Deputy, deputies, deputy sheriff, detention deputy, sworn employee, uniformed sworn employee, sworn administrative employee, and
2. civilian, non-sworn employee.

B. *Employee:* When used without further clarification, the term employee is inclusive of all agency members (sworn and non-sworn).

C. *Acquisition:* The digital imaging of various firearm-related markings present on cartridge casings into NIBIN.

- D. *Audit:* An inspection used to evaluate, confirm, or verify activity related to quality.
- E. *BrassTrax HD3D:* The current acquisition station developed by Forensic Technology, Inc. that captures highly detailed images of cartridge cases, to include firing pin impressions on the primer, breech face, extractor and ejector markings. Also referred to as BrassTrax.
- F. *Cartridge Casing:* The remnant of a round of ammunition consisting of the cartridge case and the primer, which is entered into BrassTrax.
- G. *Correlation:* The automated comparison of an acquired digital image to other acquired digital images in the NIBIN database using an algorithm that provides a list of ranked, possible matches.
- H. *Correlation Review:* The on-screen comparison of an acquired digital image by a trained technician/specialist to determine the potential for two cartridge casings to have been fired from the same weapon.
- I. *Evidence:* Any item or objects, collected from a crime scene or as part of a criminal investigation that was submitted for forensic examination.
- J. *FSU:* Forensic Services Unit, also referred to as Forensics, “the Lab”, Evidence.
- K. *Forensic Technology, Inc. (FTI):* The corporation behind the BrassTrax and Matchpoint systems, FTI is responsible for troubleshooting, maintenance, and physical or network issues regarding the BrassTrax and Matchpoint systems. Also known as Ultra Forensic Technology.
- L. *IBIS Technician:* An employee of the NIBIN site or a supporting agency who is trained in the use of IBIS equipment. May be trained in acquisitions or both acquisitions and correlation reviews.
- M. *Integrated Ballistics Identification System (IBIS):* An automated ballistics imaging and analysis system that populates a computerized database of digital ballistic images of cartridge casings from crime guns.
- N. *MatchPoint Plus:* The current system used for correlation review and

lead generation. Also referred to as MatchPoint.

- O. *Microscopic Comparison*: The process of having a trained Firearm Examiner determine whether cartridge casings were fired by the same firearm. Also referred to as Confirmation.
- P. *Minimum Required Operating Standards (MROS)*: A series of standards implemented by ATF in July of 2018 intended to maximize the impact of NIBIN as an investigative tool. ATF has mandated that all sites comply with these standards as of December 31, 2020 in order to continue utilizing the NIBIN network.
- Q. *National Integrated Ballistics Identification Network (NIBIN)*: The program managed by ATF that automates the imaging of the unique identifiers of fired cartridge cases and stores the digital images in a database for comparison across a national network of connected sites.
- R. *NIBIN Authorized Trainer (NAT)*: A technician who is trained and authorized by the ATF to train others in the acquisition of ballistic images.
- S. *NIBIN Hit*: The result of two or more firearm ballistic evidence acquisitions that were confirmed as a match by a firearms examiner through the process of microscopic comparison. Suitable for court purposes.
- T. *NIBIN Lead*: An unconfirmed, potential association between two or more pieces of ballistic evidence based on correlation reviews using MatchPoint. Not suitable for court purposes until confirmed through the process of microscopic examination by a trained firearm examiner.
- U. *NIBIN Program Administrator (PA)*: An individual the NIBIN site has appointed to communicate with all parties (i.e., submitting law enforcement agencies, ATF, etc.) involved in the NIBIN process. The NIBIN Program Administrator must be a qualified NIBIN user and a full-time employee of the NIBIN site. The NIBIN Program Administrator should be responsible for implementing and directing policies and procedures for the NIBIN site.
- V. *NIBIN Site*: The location where acquisitions and correlations are performed, as designated by the ATF and FTI. Also referred to as Site.

- W. *NIBIN National Correlation and Training Center (NNCTC)*: The site at which correlation reviews are processed for sites serviced by the NNCTC. Also, the location where NIBIN related training is conducted.
  - X. *Qualified Person*: A member of a law enforcement agency who meets the eligibility requirements for a NIBIN authorized user as determined by the NNCTC.
  - Y. *Triage*: The required process of grouping cartridge casings based on the observable ballistic "fingerprint" left on them by the firearm in an attempt to narrow the entered exhibits to the most exemplar of the groupings generated. This is not intended, nor may it be interpreted, to be a comparative examination to determine how many firearms were responsible for firing said cartridge casings.
  - Z. *Work Product*: Materials produced internally by the NIBIN site, such as notes, spreadsheets, photographs, test fired cartridge casings, etc.
- IV. Procedure:
- A. Transfer the appropriate evidence to the custody of the IBIS technician within two business days of reception at least 80% of the time.
  - B. All firearms and casings submitted should have their respective examination tasks (i.e., DNA testing, fingerprinting, etc.) completed prior to test fire and/or acquisition. Those tests should be completed in a timely manner such that IBIS can have the firearm test fired and entered within the allotted two-day period.
  - C. Firearms that are not commonly submitted to IBIS include shotguns, bolt action or single shot rifles, revolvers, or firearm receivers. While these firearms are not generally submitted, they will be accepted on a case-by-case basis, as determined by the Program Administrator or the IBIS Technicians.
  - D. Firearms and casings are to be submitted with their appropriate work request and/or pre-logged according to proper protocol.
  - E. Firearms that are submitted will be test fired by a qualified IBIS technician or their qualified designee within two days of reception.

- F. The technician or their qualified designee will retain the cartridge casing in an envelope containing the firearm information, to include its make, model, serial number and/or barcode.
- G. Recovered cartridge casings are to be triaged within two days of reception into FSU. The casing(s) selected for IBIS entry will be marked in such a way to identify them apart from the casings not being entered. Each casing to be entered should have its exhibit number on the casing, the box containing the casing, and the envelope the box is stored in.
- H. The technician will enter the specimen (i.e., test fire, recovered cartridge case) into BrassTrax within two days of reception into FSU. This standard will be adhered to a minimum of 80% of the time. The casings will be entered into BrassTrax in accordance with ATF and FTI standards.
  - 1. All casings will be entered into IBIS with correct and complete information in all required fields. The following constitute required fields:
    - a. *Case Number:* Formatted as SC (AGENCY ABRIVIATION) (YY)-(REMAINING OCA), which is to say, 2019001234 from CCSO would be formatted SC CCSO 19-001234.
    - b. *Occurrence Date:* The date the incident occurred.
    - c. *Receipt Date:* The date the evidence or test fire entered the IBIS Unit. For CCSO, this will be the date evidence was checked in to FSU. For outside agencies, this will be the date their evidence entered the IBIS office.
    - d. *Event Type:* This will be the type of crime associated with the case.
    - e. *Originating Agency Name:* This will be the agency who originally took the report.
    - f. *Originating Agency Reference:* This will be the case number of the originating agency as they format it.
    - g. *Firearm Exhibit Information:*
      - i. Make

- ii. Model
  - iii. Caliber
  - iv. Firearm Type
  - v. Serial Number
  - vi. Importer Information (Name and State)
- h. Upon completion of the acquisitions, the IBIS Technician will store the casing in its appropriate container, where it will then be sealed in accordance with the evidence handling protocol. The sealed package will then be stored in its appropriate storage location.
- i. Firearms test firing for other agencies will be conducted Monday through Friday during normal business hours. Exceptions will be made for extenuating circumstances. Submitting agencies should submit firearms for test fire with their appropriate work request or have them pre-logged in accordance with pre-logging procedure. IBIS Technicians will notify submitting agencies when their evidence is ready to be retrieved.
- j. Submitting agencies may schedule appointments for test fires and casing entry to be completed the same day. These appointments are to be scheduled Monday through Friday during normal business hours.
- k. Qualified IBIS Technicians will review the correlation requests list in order of submission, with exception given to high-priority cases. IBIS Technicians will conduct correlation reviews within two business days of acquisition. This standard will be adhered to at least 80% of the time.
- l. In the event that a NIBIN lead is found, the following procedure will apply:
- i. The lead will be reviewed by a separate, qualified IBIS Technician or the Program Administrator, who will either concur with the lead or remove it. This will be completed for every lead established.

- ii. A Lead Notification will be generated and a copy will be sent within 24 hours of creation to the investigating deputy and all additional parties involved; ATF Charleston field office, and all agencies with whom the lead is associated.
  - iii. Upon request, correlated evidence, to include cartridge cases and/or associated firearm(s) under the custody of CCSO, will be submitted to a Firearm Examiner at the South Carolina Law Enforcement Division (SLED) to verify the lead by means of microscopic comparison, thereby establishing it as a confirmed NIBIN hit.
  - iv. Items submitted to SLED will be sealed and logged in accordance to SLED pre-logging procedure. Upon reception by SLED, evidence will pass into their custody. Items will be retrieved by an authorized deputy upon completion of required examination.
  - v. If the lead is established after the firearm and/or cartridge casing(s) have been returned to the submitting agency, that agency's representative will be contacted and informed. That agency is then responsible for submitting their firearm and/or cartridge case to SLED for confirmation.
  - vi. If a lead is confirmed, a report from SLED reflecting all of the pertinent information will be rendered to the submitting agencies and CCSO.
  - vii. Upon notice of a confirmed hit, IBIS Technicians at CCSO will mark the lead with a date of confirmation.
  - m. IBIS Technicians will run e-Traces on all firearms submitted to FSU, with the exception of firearms that are collected as part of a Metro Narcotics investigation. This will be completed after the weapon has been test fired.
- I. Outside Agency Submissions:
- 1. Outside agencies are encouraged to submit firearms and ballistic evidence to CCSO for IBIS testing, provided that



firearms are submitted in accordance with IBIS policy regarding work requests and pre-logging.

2. Outside agencies are encouraged not to submit firearms or ballistic evidence if more than one calendar year has passed between collection by the original agency and submission to CCSO IBIS for testing.
3. In the event of backlog or failure to comply with MROS standards, the NIBIN Program Administrator may suspend submissions until such a time that CCSO IBIS is compliant with MROS standards.

J. NIBIN Training:

1. CCSO IBIS technicians who are trained as NAT's from the NNCTC in Huntsville, AL will conduct training courses no more than once per month with no more than two qualified individuals per class.
2. These individuals are required to register for acquisition classes with the Program Administrator, who will then coordinate with ATF to schedule a class.
3. The Program Administrator or their designee will maintain training records and documents for NAT's as well as their trainees.

K. Quality Assurance:

1. Equipment Calibration and Maintenance:
  - a. The Program Administrator will maintain a log of all IBIS critical instruments.
  - b. IBIS will run quarterly tune-ups and diagnostics on the BrassTrax System. A log will be maintained by the Program Administrator or their designee.
2. The Program Administrator or their designee will maintain a record of all relevant training and qualifications for each authorized NIBIN user.
3. MROS audits will be conducted every two years by trained and authorized auditors from ATF. Internal audits may be conducted at the discretion of the Program Administrator.

4. Proficiency Tests:

- a. The Program Administrator or their designee will administer proficiency test for each authorized user at least semi-annually. The proficiency tests will be printed and maintained by the Program Administrator or their designee.
- b. In the event that a proficiency test is failed, the user will be required to take a remedial proficiency test after being instructed on their errors.
- c. Should the user continue to fail proficiency tests, the Program Administrator and the FSU Supervisor may take further action at their discretion.

L. Organization and Personnel:

1. The IBIS Unit at CCSO will be under the direction and chain of command as outlined in CCSO policies *1-10 Organizational Structure, 9-01 Property and Evidence Control, and 9-02 Collection and Preservation of Evidence*.
2. The IBIS Unit will be supervised by the appointed NIBIN Program Administrator.
  - a. The NIBIN Program Administrator will be a full time employee who is certified and current in both the acquisition of cartridge casings and the correlation of acquired images.
  - b. The Program Administrator will oversee the daily operations of the NIBIN site to which they are assigned and will have the authority to initiate, suspend, and resume NIBIN operations for the site and its technicians through their chain.
  - c. The NIBIN Program Administrator will evaluate and approve new and modified procedure as needed.
  - d. The NIBIN Program Administrator will review and maintain training records and qualifications of all certified users at their site.

- e. The NIBIN Program Administrator will coordinate site audits with the ATF auditing team.
    - f. The NIBIN Program Administrator has the authority to delegate tasks to IBIS technicians as they see fit.
  3. CCSO will designate an Assistant NIBIN Program Administrator who will meet all qualifications of a NIBIN Program Administrator, and who, in the event of a vacancy in the Program Administrator position, will assume the role of Program Administrator within no more than 14 days of a vacancy being established.
    - a. Should there be a change with a Program Administrator, Appendix B Notification Form for NIBIN Program Administrator Contingency Plan will be filled out and sent to the ATF Audit and Training Branch within 14 days of a vacancy being established.
    - b. In the event that no qualified individual exists to fill the role of NIBIN Program Administrator, the FSU Supervisor will assume the role of acting Program Administrator until such time that an existing IBIS Technician can obtain the necessary qualifications to assume the position.
- M. Facilities and Security:
  1. The IBIS site at CCSO is located in the Forensic Service Unit, where it is under four layers of security and fully in compliance with CALEA accreditation standards and ATF standards regarding security.
  2. The NIBIN Program Administrator maintains a list of all individuals with access to the BrassTrax and MatchPoint systems.
  3. Outside agencies are currently allowed to use the IBIS terminals without supervision only after completing NIBIN acquisition training and a one-week supervised training period with either the NIBIN Program Administrator or the Assistant Program Administrator. The additional week of training is not required if the user received acquisition training from CCSO as part of the NAT program.

4. Access for outside agencies is currently limited to the main FSU hallway, 1 bathroom, and the IBIS acquisition and correlation office.
  5. To gain access, outside agency users will be issued an electronic key card which grants them access into the restricted parking lot, and is used in combination with the cipher lock to gain access into the FSU wing. The user then disarms the alarm to the secured hallway with their own unique passcode. All other wings and offices secured daily.
  6. Upon entering the office, the user will sign in on the log provided in the office and will sign out when leaving.
  7. It is the user's responsibility to close the office door and re-engage the alarm and cipher lock upon completion of their acquisitions and/or correlations.
  8. In the event that a user is no longer permitted to enter or correlate casings at the site, the Forensic Services Sergeant or Program Administrator will notify the Information Technology Services Manager that the user is no longer authorized so that they may disable their electronic key card. The Forensic Services Sergeant will also arrange to have the combination for the cipher lock changed and their alarm access code disabled.
  9. The alarm and its maintenance logs are maintained by Facilities.
- N. Evidence Control:
1. All evidence is maintained and controlled in accordance with CCSO and FSU policies and procedures. All evidence is marked with unique identifiers and sealed with tamper-proof seal tape.
  2. All evidence is to be stored in designated areas, which are inaccessible by outside agency users.
- O. Corrective Action:
1. Corrective Action for NIBIN Site:
    - a. In the event that CCSO IBIS is not in compliance with the MROS by the required time, it will be up to the

Program Administrator to work in conjunction with the ATF Audit Team and the FSU Supervisor to determine areas of noncompliance.

- b. Once areas of noncompliance are found, the Program Administrator will meet with all IBIS users to draft plans to gain compliance.
- c. The Program Administrator and the FSU Supervisor will then conduct an internal audit within two months to ensure MROS compliance is met.

2. Corrective Action for NIBIN User:

- a. In the event that a NIBIN user fails any step of the acquisition process, the Program Administrator or their designee will complete a "Notification of IBIS Entry Error" form, listing in detail the nature of the error. This will then be given to the offending user, who will then be required to correct the issue. They will then sign the form, indicating the correction has been made, and return the form to the Program Administrator or their designee.
- b. The Program Administrator or their designee will keep a record of all errors.
- c. Should a user accumulate more than three error notifications in a one-month period, the Program Administrator will inform the user that they are required to attend remedial training for a period of time to be designated by the Program Administrator.
- d. Should a user continue to accumulate error notifications, the Program Administrator may, at their discretion, require additional action to be taken, to be decided by the Program Administrator and the FSU Supervisor.