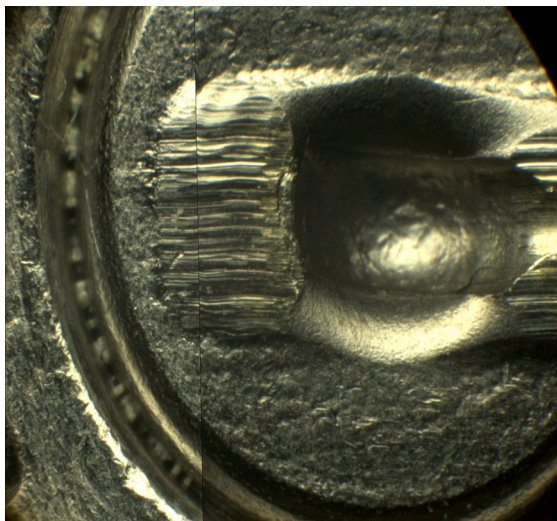




U.S. Department of Justice  
Bureau of Alcohol, Tobacco, Firearms and Explosives

## NATIONAL INTEGRATED BALLISTIC INFORMATION NETWORK

### Technical Note: Proper Orientation for Cartridge Case Acquisition



#### How to Orient All Cartridge Cases

- The Ejector Mark is placed in the Northern Hemisphere; the Extractor Mark is placed in the Southern Hemisphere
- If the cartridge case has no Ejector Mark, Extractor Mark, or no distinguishable breech face marks, then position the cartridge case where most of the identifiable marks are visible.

#### How to Orient Cartridge Cases with Parallel Striations

- The breech face striations should be horizontal

#### How to Orient Cartridge Cases with Arched Striations

- The breech face arcs should be “frowning”
- The summit of the arcs should be at the 12:00 position

#### How to Orient Cartridge Cases with Drag Marks

- The drag mark should be at the 3:00 position unless you have parallel or arching striations

If you have a breechface surface that is smooth, crosshatch, circular, granular, or with no characteristics at all, you should position the cartridge case with the Ejector Mark in the Northern Hemisphere and the Extractor in the Southern Hemisphere.

**Breechface ROI Guidelines:** The blue ring is placed on the outer edge of the primer. The red ring is placed slightly outside of the outer edge of the firing pin impression -- remove any washout if at all possible.

**Firing Pin ROI Guidelines:** The red ring is placed just inside the top edge of the firing pin impression.

#### Ejector Mark ROI Guidelines:

- Position the cartridge case where the rim aligns with the vertical red guide at the top and bottom of the acquisition window
- The outline of the impression should be 1cm outside the impression
- Trace the outline of the edge of the cartridge case (leave no “dark” space)
- Exclude the headstamp and washout when possible
- Bridge when needed

#### Circular Rimfire ROI Guidelines:

- Position the cartridge case as you would for an Ejector Mark
- The impression should be in the 3:00 position
- The outline of the impression should be 1cm outside the impression
- Exclude the headstamp and washed out area when possible

### **Rectangular Rimfire ROI Guidelines:**

- Position the cartridge case as you would for an Ejector Mark
- Position the impression in the lower left quadrant
- The top of the impression should be parallel to the horizontal red line and the right edge of the impression should be parallel to the vertical red line
- The outline of the impression should be 1cm outside the impression excluding the washout when possible

**WITH ALL IMAGES....VERIFY LIGHT INTENSITY AND FOCUS BEFORE SAVING!**

**WITH BRASSTRAX IMAGES....REVIEW IMAGES FOR PROPER ALIGNMENT/ORIENTATION, LIGHTING, AND FOCUS BEFORE SUBMISSION AND SYNCHRONIZATION!**

When possible, images should be acquired with a consistent alignment. This will ensure better correlation results, and it will speed up the process of correlation/image review. Also, please verify the proper correct class data when entering in your exhibit information (i.e. **A Glock does not have a circular firing pin!**).

Written By: Niki M. McCall, IBIS Specialist, IBIS Technical Leader, ATF Forensic Science Lab- Atlanta

## **Phoenix Police Department Expands Efforts**

The Phoenix Police Department joined the NIBIN program in 2002 and has had much success in removing criminals from the streets. Due to their commitment to the NIBIN program, several law enforcement agencies throughout Arizona, who lacked NIBIN equipment, began filtering their ballistic evidence through the Phoenix PD to be entered into the NIBIN database. By 2008, the Phoenix PD purchased additional Brass-Trax and Matchpoint+ stations to accommodate these rapid requests.

During the summer of 2008, the “Phoenix Metro NIBIN Program” was introduced to further increase information sharing across jurisdictions as well as participation in the NIBIN program. With the support of ATF, 12 individuals from 11 different law enforcement agencies throughout Phoenix were trained and certified to complete NIBIN entries and correlations. Within the last 4 years, participating Phoenix Metro NIBIN agencies have accounted for more than 3,000 acquisitions and over 45 hits, one

which led to the discovery of a firearm used in a triple homicide.

In conjunction with the “Phoenix Metro NIBIN Program,” the Phoenix PD Gun Enforcement and NIBIN Squad also hold monthly NIBIN shootings. This welcomes law enforcement personnel throughout Arizona to attend and test-fire their seized firearms. As a result, over 10,000 firearms have been test-fired from 20 different law enforcement agencies throughout Arizona.

To further illustrate the importance of NIBIN in Arizona, 22 people attended the NIBIN certification training held at the Phoenix PD this past August, under the direction of Joe Zorola from FTI. Attendees included representatives from the U.S. Customs and Border Patrol, who will be working with the Tucson PD to enter ballistic evidence seized by Border Patrol.

The Phoenix Police Department is proud to work with participating NIBIN agencies in the Phoenix Metro-

politan area, as well as all law enforcement agencies in Arizona, in an effort to increase the effectiveness of the NIBIN program.

Submitted by: Sergeant Brandon Huntley, Phoenix Police Department

## **Mobile BrassTrax Unit**

In September 2012, as part of ATF’s “Front –line Strategy,” the NIBIN program participated in the surge at Flint, Michigan. In an endeavor to reduce violent crime throughout Michigan, 14 local, state and federal agencies came together to work toward this common goal. As a pilot project, steered by ATF and FTI, NIBIN launched the use of the Mobile Brass-Trax Acquisition Station. This allowed the Mobile BrassTrax laptop to be transported to Michigan State Police Laboratory in Bridgeport, each week, to upload images and start the correlation process. By the end of the four week

pilot project, IBIS Specialists and Technicians entered 522 test fired cartridge cases into the IBIS system.

The NIBIN Branch has identified 3 potential candidates for confirmation and has passed this information to the Flint Police Department for further follow-up.

The BrassTrax Acquisition Station has since been moved to Camden, NJ, where it will begin the correlation process mid-February. At the end of the pilot, ATF and FTI will meet to evaluate the effectiveness of this project.

Submitted By: Walter Dandridge, IBIS Chief, ATF Forensic Science Lab- Maryland

## NIBIN News

### NIBIN Users Directory

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We are in the process of updating the National Directory of NIBIN Users. By now, every site has been contacted to provide current contact information.

The latest version of the NIBIN Users Directory was released in April 2011 and can be found in the Users Area of the NIBIN website. If any of the information listed in the directory has changed and you haven't sent updated information, please send your changes to Kendra Mingo at [Kendra.Mingo@atf.gov](mailto:Kendra.Mingo@atf.gov).

### Top 10 NIBIN Sites for Fiscal Year 2012

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1. New York Police Department, 3134 hits
2. Illinois State Police Forensic Science Center– Chicago, 2576 hits
3. Allegheny County Coroner’s Office, 2465hits
4. Miami– Dade Police Department, 1894 hits
5. Philadelphia Police Headquarters, 1684 hits
6. Newark Police Department, 1673 hits
7. Virginia Division of Forensic Science–Eastern Laboratory, 1571 hits
8. Columbus Police Department Crime Laboratory, 1473 hits
9. Santa Ana Police Department Forensic Services, 1349 hits
10. Houston Police Department, 1171 hits

NIBIN Total: 50,038 hits

Thank you to all our Users. NIBIN couldn’t be a success without your dedication and hard work.

### New NIBIN Hits Email

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Our new monthly hits email is up and running! Please send confirmed hits to [NIBINMonthlyStatistics@atf.gov](mailto:NIBINMonthlyStatistics@atf.gov) by the 2nd Friday of the following month. In the email please include the following information:

- Full name, city and state for your laboratory
- The number of CONFIRMED hits for that month
- Indicate if the hit(s) are casings and/or bullets

### NIBIN Contacts

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*If you would like to be included in the NIBIN Newsletter, feel free to submit an article. This is a great way to highlight your lab, department, or an event. A picture is encouraged for each article. Due to security regulations, pictures with photo ID badges visible can’t be published. All submissions may be edited and are not guaranteed to be included in the newsletter.*

*Suggestions and articles can be sent to Kendra Mingo at [Kendra.Mingo@atf.gov](mailto:Kendra.Mingo@atf.gov).*