

DRPC



SHOTMARKER TRAINING

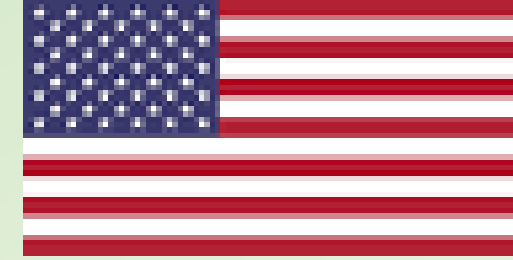
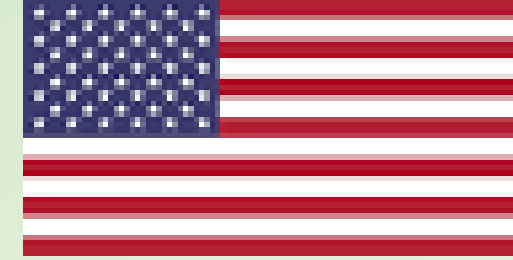


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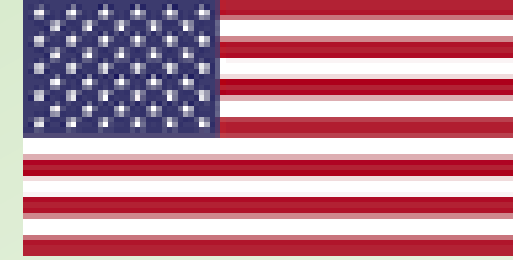
SHOTMARKER OVERVIEW



- Shots of any caliber will be detected which:
 - Arrive within the sensor area
 - Have supersonic velocity at the target
 - Arrive at an angle within 20 degrees
 - Do not hit a solid material mechanically attached to the sensors (such as the frame itself, or a backing material that is too stiff)
 - All components are sealed and will function in the rain.
 - Accurate to within 1 mm
- Accuracy considerations
 - Low shot quality is caused by crooked sensor placement.
 - Random error is caused by sensor movement.
 - Ensure the frame does not flex and shake in the wind.

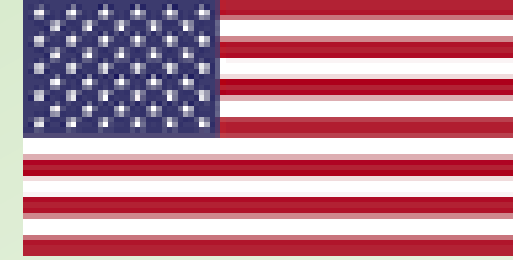


SHOTMARKER CONTENTS



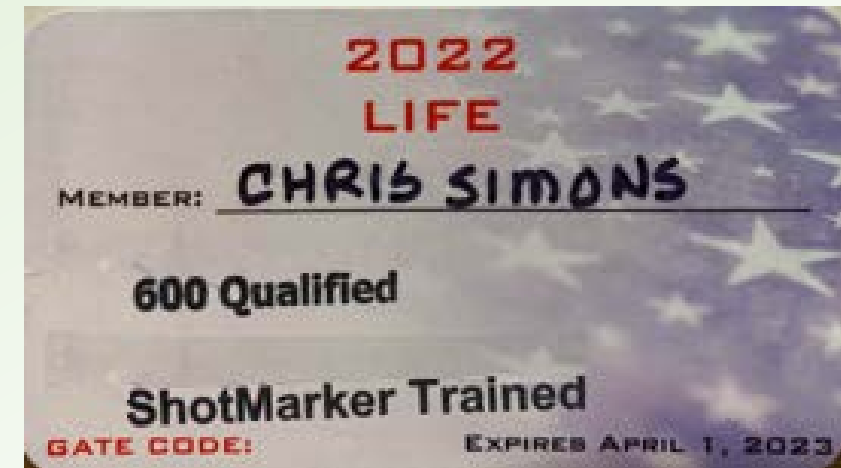
- 1 Access Point
- 2 Sensor Hub
- 3 Sensors (4)
- 4 Brackets (4)
- 5 Sensor cables (2 short, 2 medium, 2 long)
- 6 Couplers (2)
- 7 Antenna
- 8 Antenna extension cable
- 9 USB charging cable (2)

TRAINING & QUALIFICATION

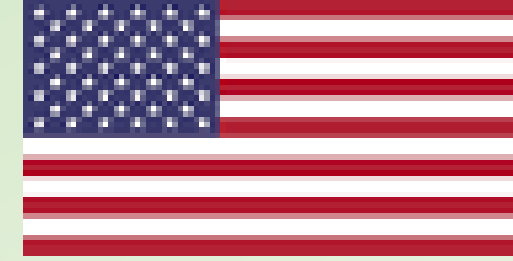
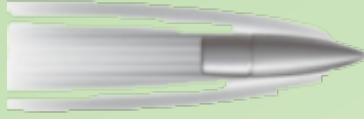


- Completion of this training will qualify a member to use the ShotMarker system.
- Once training is complete, the RO will stamp the membership card.
 - Non-600 qualified will only be given the code to the 200 ShotMarker locker
 - 600 qualified will be given both the 0 and 200 ShotMarker locker codes

- The RO will update Membership Database:
 - 200 ShotMarker Trained
 - Or
 - 200 ShotMarker Trained
 - 600 ShotMarker Trained



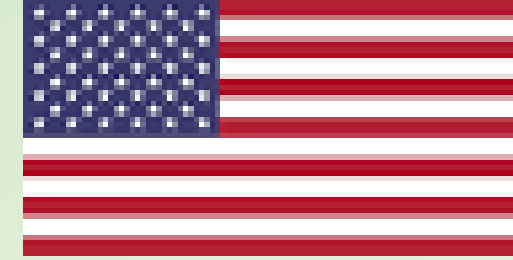
SIGN-OUT & STORAGE



- The 200 GP ShotMarker must be signed-out from, returned to, and stored in to the 200 GP ShotMarker locker located next to the kitchen cabinets in the lobby.
- Sign-out/in Process
 - Enter the name, date, time out/in, and any observed issues in the notebook in the locker.
 - Plug in and charge access point and hub.
 - If another qualified member will take possession while the system is in use at the 200 GP, sign the logbook with who took possession of the system
 - Qualified members **MUST** have their Membership Card stamped ShotMarker Trained
- Only trained members will be eligible to sign-out the ShotMarker; non-qualified members may try the ShotMarker system only if a qualified member is present during shooting. The member who signed-out the system, or who took possession of the system is directly responsibility for the ShotMarker while in their possession.

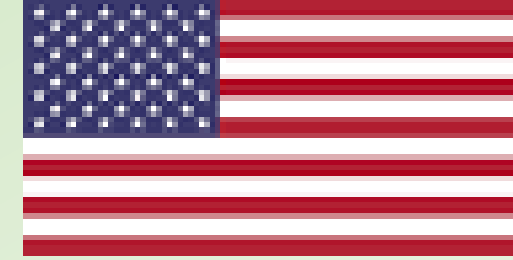


SYSTEM FAILURE



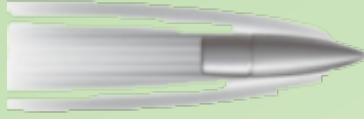
- Upon returning the system to the locker, complete an entry in the log-book.
- If urgent or a catastrophic failure of the system, inform a RSO or Board member in person or via email
 - RSO: allRSO@desotogunrange.com
 - Board: board@desotogunrange.com
- System failures which are the result of an accident (not negligence) will be reviewed by the board to determine how best to secure the system from harm in the future, but will not be charged back to the member on a single occurrence
- If a member has repetitive accidental occurrences, the board will take the necessary actions deemed necessary.
- Negligence will NOT be tolerated and if catastrophic failure of the system is the result of negligence, the member may be asked to reimburse the cost of any replacement part(s).
- Some items are more susceptible to damage and therefore extra parts already purchased (Items 4 thru 9 from the ShotMarker Contents). Report failure of these items too so the Board may ensure proper operating condition of the system.

SETUP AND USE

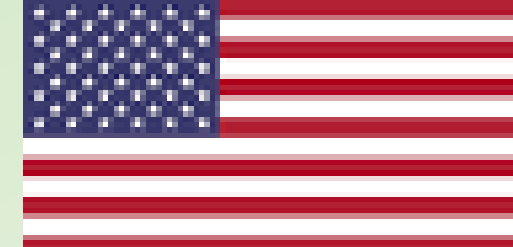


- **The 200 GP ShotMarker system SHALL NOT be used on 600, and 600 ShotMarker system SHALL NOT be used on 200 GP**
- The system provides instantaneous feedback to the shooter via a tablet or phone which is connected to the ShotMarker system
- A tablet is in the 200 yd ShotMarker locker for members to use on the 200 GP
- When the ShotMarker is being used, the system **MUST** be used on the target backer frame provided by the range
- The target backer is installed in the Northwest corner of the 200 GP range, at 215 yards.
- Only the left three shooting bays will be permitted to be used with the ShotMarker – **NO CROSSFIRING**
- When not in use, the Left three bays may use regular target backers, but shooters will need to move if the ShotMarker system is to be used.
- Other shooting lanes Right of the Left three shooting bays **SHALL** ensure their portable target backers when placed at 100 yds or 150 yds, will not impact the 215 yd ShotMarker target backer

SENSOR HUB



- Place the Sensor Hub on the target frame behind steel plate.
- Place sensors onto the color-coded brackets
 - Connect each sensor to the color-coded port using cables.
 - Choose the shortest cables possible.
 - ***Cables are to remain on target backer***
 - Press the red button to turn on the Sensor Hub.
 - Ensure the green light is solid.
 - If the light is blinking continuously, check that all cables are fully inserted. One cable may be partially connected.



- Battery lasts for 100 hours.
- Charge from any USB power source.
- Blue light while charging; off when fully charged
- Can charge while running. Reported battery level will be higher while charging.
- Sensor hub turns off after 12 hrs if not connected to AP

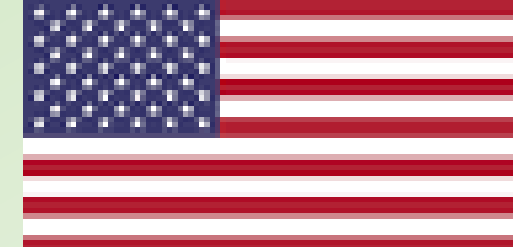
SENSOR HUB CONT'D



- Connect the antenna (*Do not use the antenna as a handle*)
 - If the pin of the antenna on the antenna extension cable is not sticking out, the antenna will not connect to the Sensor Hub and system will not work; gently push the wire into the connector to get the pin to stick out.
 - The antenna extension cable is optional.
 - Check signal strength first without extension cable and only use it if necessary.
 - If the antenna cover is detached, carefully slide it back into place.

NOTE

The Sensor Hub will connect to the Access Point immediately once both systems are on. Best practice is to connect the Sensor Hub to the Access Point before leaving the target. See the next page for setting up the Access Point.

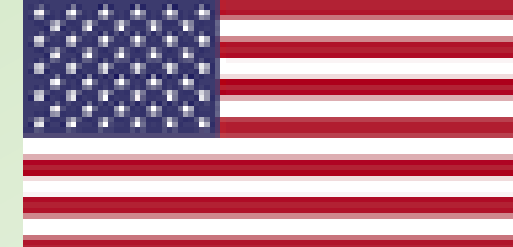


- Battery lasts for 100 hours.
- Charge from any USB power source.
- Blue light while charging; off when fully charged
- Can charge while running. Reported battery level will be higher while charging.
- Sensor hub turns off after 12 hrs if not connected to AP

ACCESS POINT (AP)



- Press the red button to turn on the Access Point (AP).
 - After 1 minute, the light will remain solid.
 - To shut down, press the button again.
 - Press again within 5 seconds to cancel the shutdown.
- Connect to the ShotMarker Wi-Fi network on your tablet, smartphone, or PC.
 - Open a web browser and type **192.168.100.1** in the URL bar
 - This address is printed on the rear of the Access Point for reference.
 - With Chrome for iOS or Android, you can add a shortcut to your home screen which will start full screen mode.
- Before shooting, position the AP centrally on the firing line and higher up to ensure a strong Wi-Fi signal for everyone in the area.
- *Do not mount the Access Point on a metal pole.*



- Battery lasts for 18 hours.
- Charge from any USB power source.
- Blue light while charging; off when fully charged
- Can charge while running. Reported battery level will be higher while charging.
- Turns off after 3 hrs when no Sensor Hubs connected.

DISPLAY INTERFACE



11:04 LTE

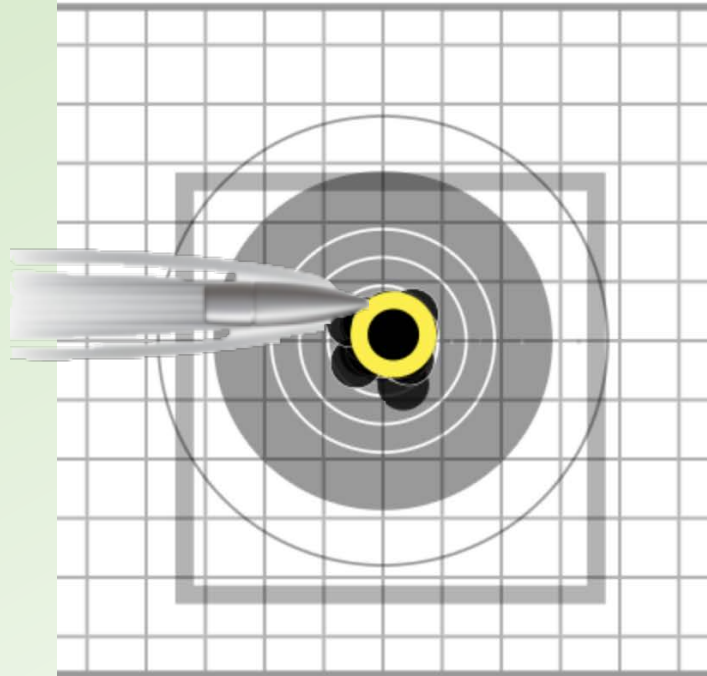
shot # **X** fps 1800

Simons, Chris
Jan 25, 2020
9:47 am

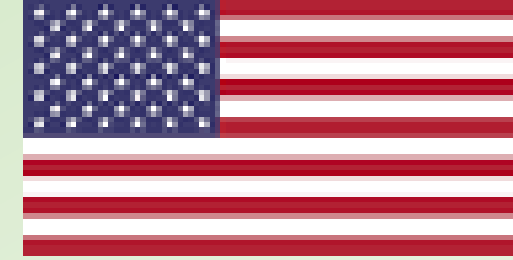
NRA MR-1FC
at 600yd (308 cal)

40 shots avg **1933**
395-25X SD **144.5**

9	X	X	7	X	X	X	10	10	10
X	X	10	9	X	X	X	X	X	X
10	9	X	10	10	10	X	X	X	X
X	10	X	X	X	X	10	X	10	X
X	10	9	X	X	X	9	10	X	9



INTERFACE OVERVIEW



hidden shot

S2
S1
1
2
3

Tap to select a shot.
New shots have blue highlight.

Drag to pan, pinch to zoom.
Zoom in for all shot numbers.

shot # 5 **X** fps 2421

Selected shot details.
Tap to strike the shot, or to insert or modify a score.

Access Point status and system configuration.

Sensor Hub status and target frame configuration.

NRA MR-63FC at 300 yards

Target face, distance, and caliber.

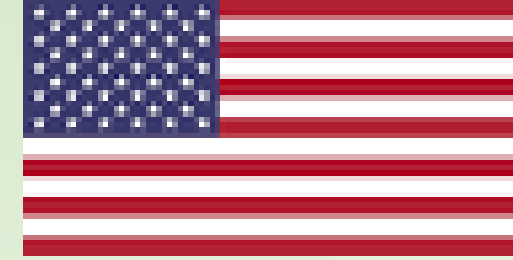
5 shots avg 2431
2.98 inch SD 6.1

Tap to save / clear the target.
Displays stats for all record shots.

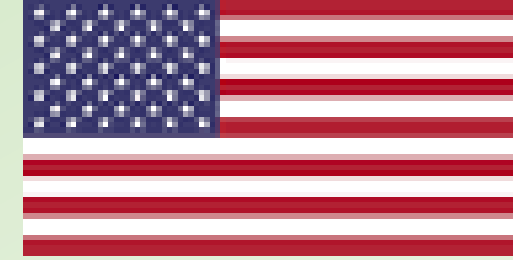
Archive of saved strings.

Tip: Try the **Shot Simulator** to create some fake shots and explore the interface before you start shooting.

INTERFACE OVERVIEW (CON'T)



ADMINISTRATION SCREEN



Access Point

100% remaining est. 18 hr 0 min | 97% free est. 58k shots | Apr 10, 2020 11:06 am

Display Preferences

Grid: off | 1 moa | 0.2 mil | 1 inch

Velocity: off | fps | m/s

Stats: off | score | inch | mm | moa | mil

Shots: all | recent | delayed | restricted | disabled

Sighters: none | one | two | two convertible | unlimited

Caliber: 224 | 243 | 264 | 284 | 308 | 338 | 510 | Other

Analysis: X | Y | size | W | H | MR | V | SD | ES

System Management

Security: none | low | medium | high

Show All Targets | Shot Simulator | Switch Channel | Export CSV

Save Backup | Restore Backup | Software Update

Version 1.09.2 (April 10, 2020)
Download the latest software version at theshotmarker.com

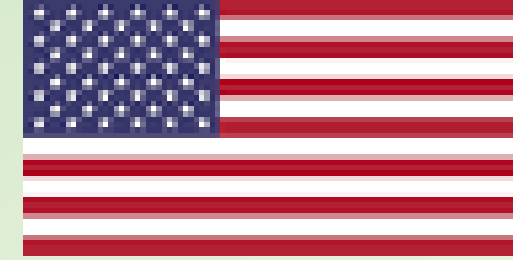
Time remaining is estimated. Reported battery life will be higher while charging. Remember to charge the Access Point before each full day of shooting.

Storage capacity for saved strings. Tap to erase older strings and free space.

If the time is incorrect, tap to sync the system time with your device.

- Grid: overlay a grid on the target (useful for scope adjustments).
- Velocity: display shot, average, and SD of velocity at the target.
- Stats: preference for display of total score or group size unit.
- Shots: control how shots are displayed on target (useful for competition).
- Sighters: choose whether the first few shots are interpreted as sighters (useful for competition).
- Caliber: select the bullet size used for display and scoring (the hole may touch the edge of a scoring ring).
- Target Row: display the most recent shot on adjacent targets, with an optional highlight when a new shot arrives (option shown when multiple targets connected).

ADMINISTRATION SCREEN (CON'T)



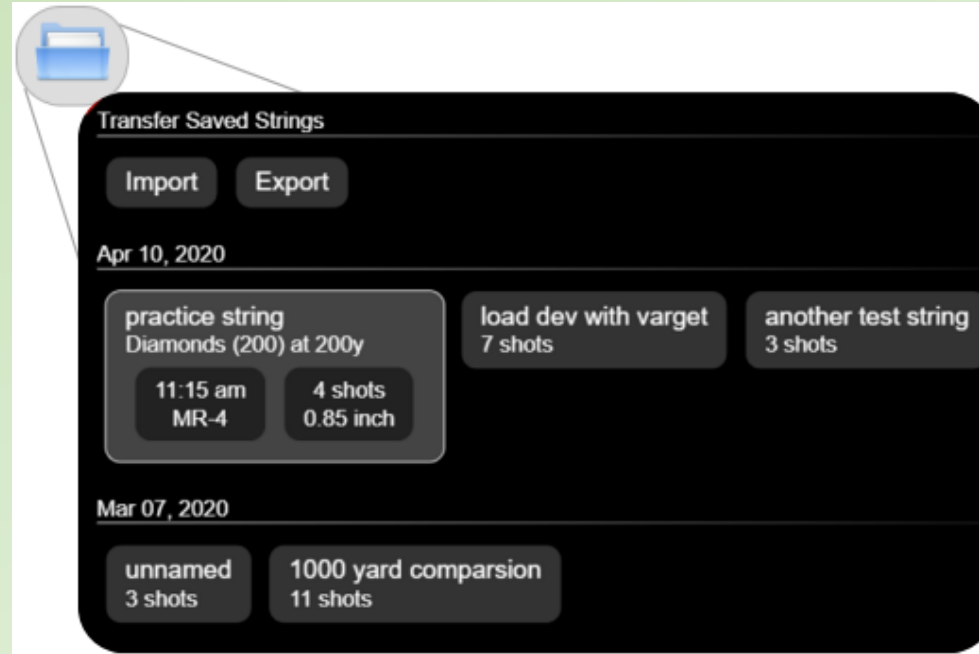
- Analysis: customize which values are calculated for groups (option shown when an analysis box is present on target).
- Security: restrict functionality to shooter and spectators with a password.
- Show / Hide All Targets: show or hide all targets which are currently disconnected for offline configuration.
- Shot Simulator: double-tap to simulate a shot on target (useful for demonstration and training).
- Switch Channel: move your Sensor Hub and Access Point to a separate radio channel to operate independently from another ShotMarker system in the area. (200GP vs 600 LR)
- Export CSV: export saved strings within a recent period of time (day, week, month, etc.) to a formatted spreadsheet.

TARGET FACE & DISTANCE



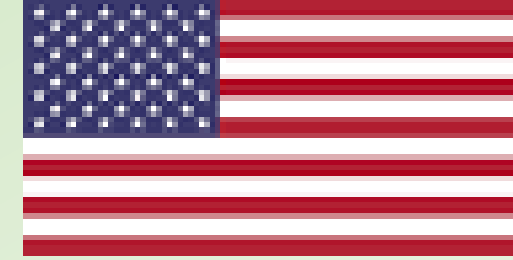
- Select the target face and distance.
 - The physical paper target is just an aiming mark and doesn't necessarily have to match.
 - This will only affect calculations of moa or mil, and the grid display.
 - Set the distance to 200 yards for the 200 GP ShotMarker
- Caliber, use the default (308) setting.
- Tap the star icon to save a favorite.
 - This target face, distance, and caliber configuration will be saved at the top of the list.
- MISC – Selects another target face
- Tap the checkmark in the bottom right corner to apply changes.

STRING ARCHIVE



- All strings are stored on the Access Point, click the white paper with pencil.
 - Enter identifying info into the save info line
 - Saved strings are organized by date and time.
- Tap the checkmark to open the string.
 - You can select and review individual shots, as well as use the Sensor Monitor to check shot quality.
 - You can modify a saved string and re-save it.
- Import / Export
- Export a selection of saved strings which can be imported into another Access Point. NOT used at DRPC

KEEPING SCORE



20 shots
194-9X

X	10	X	X	X	X	10	X	X	X	10	10
9	10	X	9	9	X	10	9	10	8		

All shots are displayed in a scorecard.
Tap a specific shot to select it.

With a shot selected, tap the shot detail panel:

shot # 1 X fps 2307



or



Sighters are valid shots that will remain on the scorecard but not be included in the total score or group measurement.



or



Hidden shots are shots that you did not fire and should not be counted (crossfires, for example).



Manually adjust the score to any other value. For example to reduce the value by 1 point.



Insert a shot of any value after this shot. For example, to insert a miss with zero value.

Shots that have been modified or inserted are highlighted in green:

10	0	9	X
----	---	---	---

Sighters can exist between record shots but are shown in red so you know something isn't quite right.

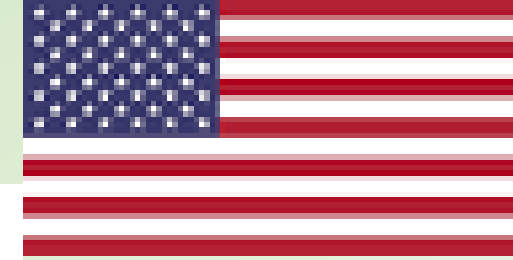
10	X	9	X	X
----	---	---	---	---

Sighters before record shots

A grey bar indicates hidden shots exist between these record shots

10	X	10	X	9	10	9	X
----	---	----	---	---	----	---	---

SIGHTER MODES



Sighter Modes:

- **None:** All incoming shots are assumed on record. You can still manually declare shots as sighters.
- **One / Two:** The first one or two shots will be assumed non-convertible sighters.
- **Two Convertible:** after firing two sighters, conversion buttons are displayed to the shooter:

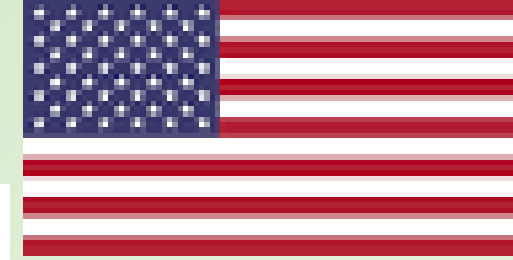
Convert
V

Convert
5 and V

- **Unlimited:** All shots are assumed sighters until this button is pressed:

Begin Record

SHOT DISPLAY MODES



Shot Display Modes:

- **All:** all shots are displayed immediately and remain on target.
- **Recent:** only the most recent shot is displayed.
 - Multiple shots within 20 seconds remain as a group (useful for identifying crossfires).
- **Delayed:** display only recent shots, and incoming shots are delayed by 7 or 10 seconds (selectable).
 - Shooters will know that a shot has been detected, but not its position or value until the delay period expires.
- **Delayed & Restricted:** display only recent shots with a delay, and any shots arriving within the delay period are automatically modified to a score of zero.
 - The score can be restored (useful in case of a crossfire).

QUALIFICATION



- RO:
 - Stamp qualified member's card
 - Write locker code(s) on back of ID
 - Update Membership Database

