ShotMarker Instructions

This short guide is intended to supplement information received at the High Power range orientation. Range orientations are conducted after each match (except for the GSM and AR-Tactical matches) concluding at the 600/1000yd firing line. A High Power range orientation must be completed before using the High Power range.

There are 5 pieces of equipment necessary for the system to function:

1. Access Point (abbreviated AP)– Transmits a Wi-Fi signal by the name of ShotMarker, and communicates with Sensor Hubs and smart devices
2. Sensor Hub (abbreviated SH)– collects data from sensors and communicates with the AP
3. Sensors (4) – units with two microphones each, which work in conjunction with each other to triangulate shot locations and other data transmitted by cable to the SH
4. Cables (4) one for each Sensor, connects microphones to the SH
5. Smart Device (iPad, iPhone, android phone or other tablet) – your personal device that connects with the AP to show your shot locations on the target

ShotMarker (abbreviated SM) systems are set up and available for your use on the High Power range at both the 600yd butts and the 1000yd target area, but you must take a few steps to bring them on-line.

SM Set-up:

1. **Place a target in the SM target carrier**:
   - The 1000yd target area is a SM only area wherein there is no option to operate targets manually. All target in the storage container are specifically for SM use. Simply unlock and open the container then place one of the targets into a target carrier by inserting it from behind. Note that only U.S. Long Range, and Long Range F-class targets are available – no other targets or modifications of any sort may be used at the 1000yd target area.
   - At the 600yds butts there are both prewired SM target carriers and other target carriers which may be operated manually. In the east side of the target shed are three SM designated targets. Target faces are the U.S. SR-1(200yd), SR-3(300yd), and MR-1(600yd). These targets may not be modified in any way and are only for use with the electronic system. Choose one of these targets and insert it in a SM target carrier from the front.
2. **Set the bottom Sensors**: At the 1000 no additional physical setup is required. At the 600, the bottom two Sensors must be moved from the storage position (on the sides of the target carrier's steel frame) to their designated magnetic brackets mounted on the front of the target carrier. When moving sensors, ensure cables are securely inserted in the sensors. These sensors are stored to the sides of the brackets to reduce the risk of them being knocked off when targets are carried down the target line.

3. **Turn on the SH**: For both the 1000 and 600, open the ammo can at the base of the target carrier. A SH is wired into the ammo can and may not be removed. Turn the sensor hub on by pushing the red button one time. The LED on the SH should begin blinking green then go to constant on, or if the SH is currently taking a charge from the solar charger, the LED will be a darker blue which will change to a brighter blue when the SH is turned on, and it may even blink a bit until it makes a connection.
4. **Turn on the AP**: Remove the AP from the ammo can (normally stared in the right most ammo can on the target line) and turn it on in the same manner as you did the SH. It too has an LED which will initially blink then remain constantly lit when a WiFi signal (named Shotmarker) is transmitted. This normally takes several minutes.
5. **Connect your smart device** to the Wi-Fi signal "Shotmarker" by going to Settings and WiFi on your device.
6. **Connect to SM URL**: There is no application to download. Open a browser on your smart device (on my iPhone and iPad I have had the most luck with Safari) and on the address line type in the following 192.168.100.1 - this will take you to the SM interface. If you have a problem connecting, it may help to turn your device to Airplane Mode in Settings. For some reason we have found that some devices have trouble pulling up and functioning with the SM system, so be prepared to experience a little trial and error until you get it up and running. This concluded SM set-up.

Take the AP with you to the firing line. Ensure good line of sight between the SM target and the AP so the two can communicate.

Be sure to turn both the AP and the SH by pushing their red buttons once, and put your target away before you leave. In the case of the 600 systems, move Sensors back to left and right of the target carriers and face them down so rain and debris doesn't get into the microphones.

The SM system you have been provided with has been carefully calibrated for the carriers and targets we use. Keep in mind that reconfiguring any of the settings will likely cause issues for the next guy, so please don't mess with system configuration.
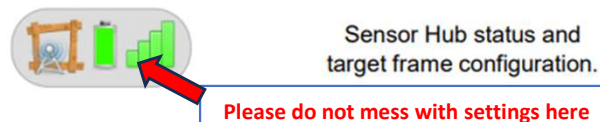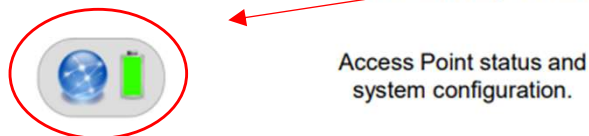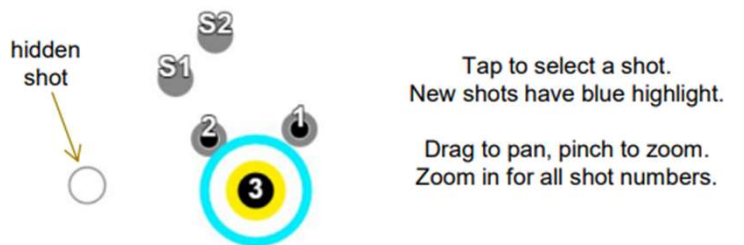
There is much more to the system. If you would like to gain better understating of SM (HIGHLY RECCOMENDED), look online searching for Autotrickler which will take you to MacDonald Innovations web site. Clicking "Support" in the main menu will take you to a page with the ShotMarker manual.

In the next four pages you will find excerpts from the ShotMarker Manual with explanations of User Default Settings, Clearing/Saving strings of fire, and Changing Target Faces.

Finally, for the "hands on" kind of guys: If you show up during any of the matches we shoot at the High Power range, we'll be glad to give you a tutorial as we can between firing orders, or after the match. SM training is a part of our orientation process but we understand it's a pretty cursory look, and we have many members who received the orientation prior to us getting SM systems. Showing up before or during a match is a great way to get a clear understanding of the system.

Overview and Default Settings

Interface Overview

hidden shot

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.

Please do not mess with settings here

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.

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When you access ShotMarker on your device, you will see the adjacent icons on you screen somewhere. Locations vary by device. Each of these control multiple options, some of which can jack things up for the next guy unless you return the system to what we will call our <u>club device default settings</u>, all under the ADMIN icon. Club Default Settings:
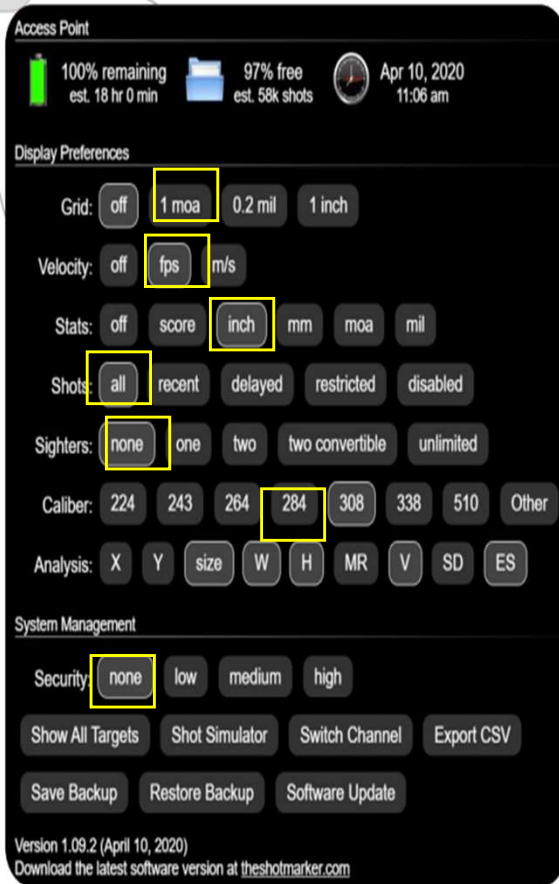
- Grid: 1 MOA
- Velocity: FPS
- Stats: Score
- Shots: All
- Sighters: None
- Caliber: .284 (It's a good average)
- System Management: Security – None

NOTE: To save changes you must click the Green Checkmark in the lower right-hand corner of dialog boxes when given this option.

These options are explained on the next page along with a screenshot of the Admin page you will see on your device when you select the admin icon.

If you change any of these settings while using the system, please return the system to this configuration before you power the system down so the next guy has our common starting point.

Administration

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.

Club default settings are shown to the left in ==yellow==. Please return the system to these settings before you power the system down.

If you power the system up and things look or act strange, configuring to these settings will get you to a simple starting place from which to operate the system.

By the way, if the power icon is low, it's a good idea to charge the Access Point while you're at the range. There should be a power chord a the 600yd outlets. Otherwise let a HP Official know via text.

Explanation of Display Preferences

- **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). See page 16 for details.

- **Sighters**: choose whether the first few shots are interpreted as sighters (useful for competition). See page 16 for details.

- **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).

- **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. See page 18 for details.

- **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. See page 18 for details.

- **Export CSV**: export saved strings within a recent period of time (day, week, month, etc.) to a formatted spreadsheet.

- **Save / Restore Backup**: export a backup file of everything stored on your Access Point. **Save backups often!**

- **Software Update**: Visit theshotmarker.com for the latest software update and instructions.

Interface Overview

hidden shot

S2
S1

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

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

| shot # | X | fps |
| 5 | | 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**

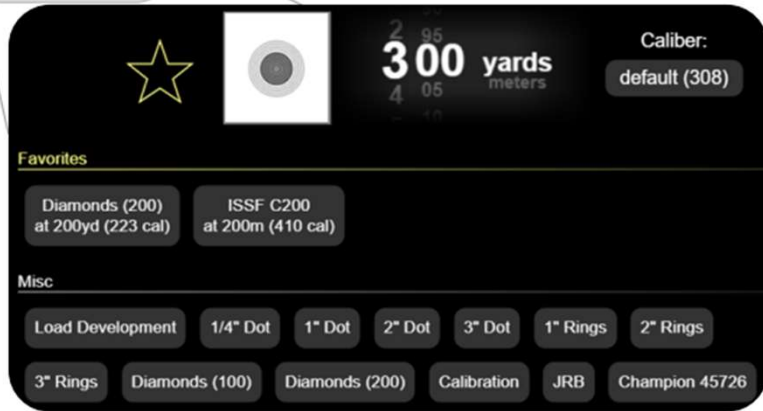Tap to save / clear the target.
Displays stats for all record shots.

Archive of saved strings.

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Clearing Shots and Saving Strings of Fire

To clear shots off of the target and save your string, click the Pencil and Paper icon. A dialog window will open that if you click on, will allow you to fill with your name or other information which the string will be saved as. If you leave the space blank the string will be saved without a name.

Saved strings can be reviewed by clicking the File Folder icon and clicking on your file.

Target Face and Distance

NRA MR-63FC at 300 yards

- Select the target face and distance.
  - Remember, your physical paper target is just a central aiming mark and doesn't necessarily have to match.
  - Any target face can be used at any distance. This will only affect calculations of moa or mil, and the grid display.
- If necessary, enter a custom bullet caliber.
  - Only use this if each target should use a different caliber. Otherwise, use the global setting (see page 11).
- Tap the star icon to save a favorite.
  - This target face, distance, and caliber configuration will be saved at the top of the list.
- Tap the checkmark to apply changes.
  - If the target is part of a group, the entire group will be updated. See page 17 for instructions on grouping targets.

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Email adamjmac@gmail.com to request additional target faces.

Click on the green check-mark in the lower right-hand corner of the dialog box to save changes

Changing Targets

To change the target face, go the Target Icon, and select the target face desired. Additional instructions are to the left.

The targets available for club use in the 600yd target shed are the U.S. SR(200), SR-3(300), and MR-1FC(600)

The targets available for club use at the 1000 are the LR and LRFC.

Scroll to the top of the target screen to see these targets saved as our "favorites".

Note: These are the only targets authorized for club use – no modifications whatsoever may be made to these physical targets. Willful disregard of this or any other rule may result in loss of privileges on this range or possible expulsion from the club. We put a lot of work into keeping this range operational and electronic target use is a privilege few clubs offer to their general membership so please help us maintain its integrity.

If a ShotMarker target needs repair or refacing, please contact a HP Official.