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Introduction

Chronograph Log was developed to record your bullet velocities, from your Chronograph, onto your iOS device. No more writing everything down on a pieces of paper to be lost in your range bag. When your friends ask about the loads you are using, you can pull out Chronograph Log and give them accurate info instead of guessing. Send them an email or message on the spot. Synchronize your data via the Dropbox Cloud and instantly populate your other devices, such as iPads, iPhones or iPod Touch. Share your favorite loads via eMail, Facebook and more.

Chronograph Log was primarily developed for USPSA IPSC and IDPA, where Minor and Major Power Factors are very important. It will color code those entries based on their velocities. Note that the Power Factors can be ignored if you are tracking rifle loads or don't care about Power Factors.

Note: This application is not a chronograph. You will need to enter readings from your chronograph into the Chronograph Log app.

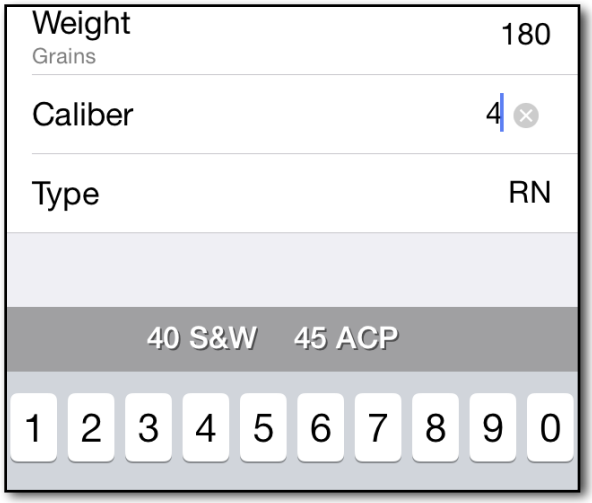
Features

- Define: Bullets, Guns and Powder in the database.
- Record velocities for each round from your chronograph.
- Automatically calculate Average, Min and Max velocities.
- Color coding to show each velocity's Power Factor.
- Export full tables to Mail.
- Export favorite loads to Messages, Mail, Twitter or Facebook.
- Backup / Restore to Dropbox.
- Bluetooth connectivity from a Competition Electronics "ProChrono Digital" with "Digital Link" Bluetooth module.

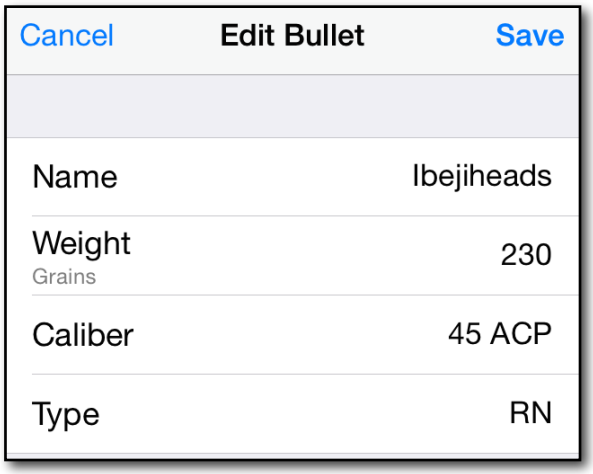
Database

The first thing that you will need to do is set up a few items in the database: Bullets, Guns and Powder. Some fields are for informational purposes only. For example the bullet Name and Type, where others are used for calculations, such as the bullet Weight or Caliber for sorting.

Note: for Caliber and Type, an autocomplete picker will show up just above the keyboard. Once you start typing, you can choose an item from the autocomplete field to complete the field. If you enter a "4", you could see selections "40 S&W" and "45 ACP", if you had previously entered them. Tap on one of those selections to auto complete the field.



Add / Edit Bullet



Name: This is a free form text field where you can describe the bullet however you want. It can be the name of the bullet maker, or could be the mold that you used to cast your own bullet.

Weight: The bullet weight in Grains. This value is used for Power factor calculations. The weight is limited to 1/10th of a grain. e.g. 230.5

Caliber: This is the caliber of the brass that you are using. It will be used for Sorting in some lists.

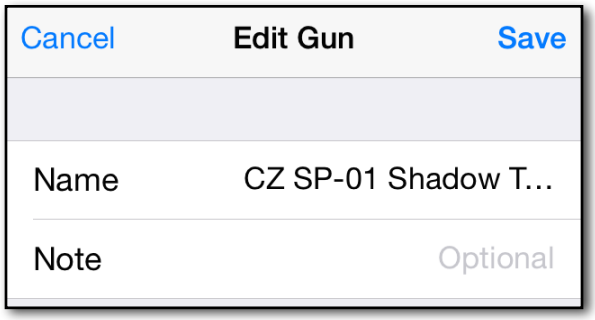
Type: The bullet type, for informational purposes only. For example: RN = Round Nose, TC = Truncated Cone, etc.

Add / Edit Guns

The Guns database is for informational purposes only. This lets you keep track of which firearm you used during testing.

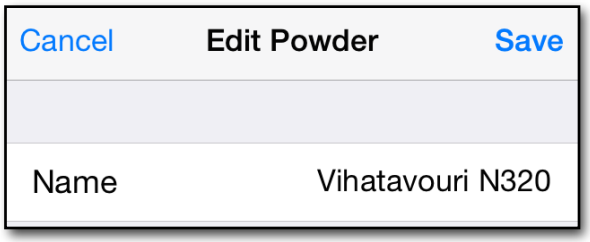
Name: Free form text to describe the gun.

Note: Free form text for any notes that you want to include with the gun. For example, it could be noted that you have an aftermarket KKM Barrel on your Glock, M&P, 1911, etc.



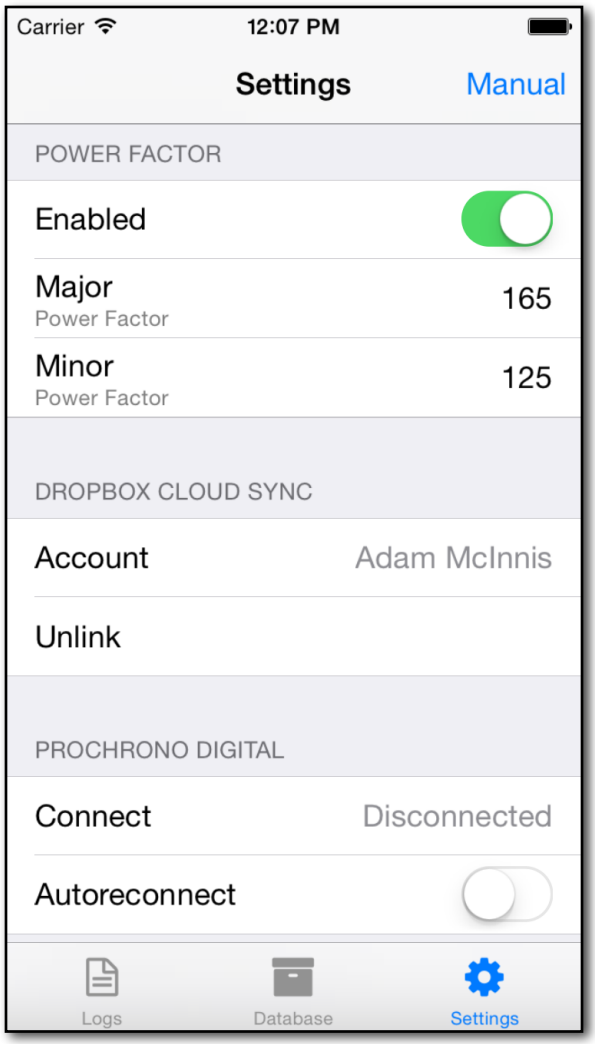
Add / Edit Powder

Name: Free form text to describe the powder. You can enter as little or as much as you want. You could enter “Vihatavouri N320” if you want to be more specific with the manufacturer name and powder type.



Settings

Power Factor



The Settings will allow you to define the Minor and Major Power Factors for IPSC and IDPA. They are defaulted to 125 and 165 respectively. If you do not need Power Factors, then tap on the switch to hide it from the logs.

Note: Power Factors are calculated in Feet Per Second (FPS).

Minor: This is the minimum value to make Minor Power Factor. If the entered velocity is less than Minor, the box will appear in Red. If it makes Minor, it will be in Blue.

Major: This is the minimum value to make Major Power Factor. Velocities for Major power factors will appear in a Green color.

Note that the Power Factors can be overridden in the Log entry if necessary.

Dropbox

Online Backup & Restore: This allows you to Backup all your data to your Dropbox account and Restore if necessary. You can also use it to copy the data to another device. For example if you use a iPhone at the Range to record some new data. Do a Backup to Dropbox when you are finished. Then you can Restore to an iPad to view it there too.

NOTE: It is very important that you only add new data on one device at a time. Say you recorded new data on both an iPhone and iPad, there would be no way to Backup/ Restore without loosing data, as the device that you Restore to will have all its data overwritten!

If you do not have a free/secure Dropbox account, you will need to create one from your web browser by going to https://dropbox.com and “Sign Up”.

ProChrono with Digital Link

Competition Electronics now has a Bluetooth module available for the “ProChrono Digital” chronographs. The “Digital Link” will allow the ProChrono to transmit the velocity directly to the Chronograph Log app.

Connect: To Connect to the ProChrono, first turn on the ProChrono and the Digitial Link. Next tap on the Connect row and it should connect to the the ProChrono. The Digital Link “Connected” light will turn green on on the Digital Link module.

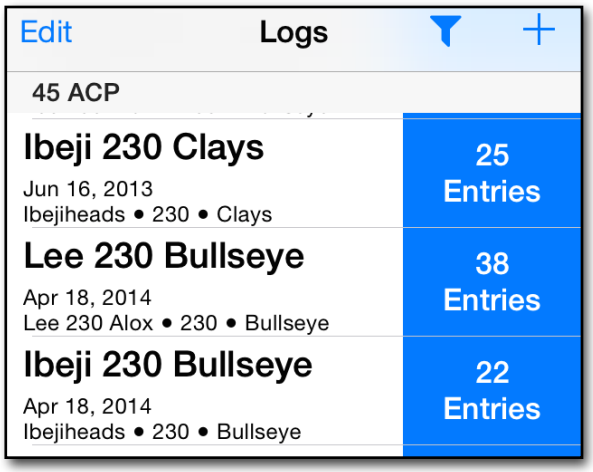
Autoreconnect: If you want to to automatically reconnect to it in the future, after it has been paired at least once, turn on the Autoreconnect switch.

Logs

The Logs tab is where you will record all your shot entries. All screens can be viewed in Portrait or Landscape mode. Some text may be truncated in the Portrait mode when viewed on an iPhone, but all text can be easily seen when in Landscape mode.

The log entries will be sorted by Caliber and Bullet Weight.

The listing will show the Name, the Date and the bullet information.



Add / Edit Log

Name: Free form text to describe the entry.

Date: The date you recorded the test rounds.

Conditions: If you want to record the weather conditions.

Gun: Select from your Gun database.

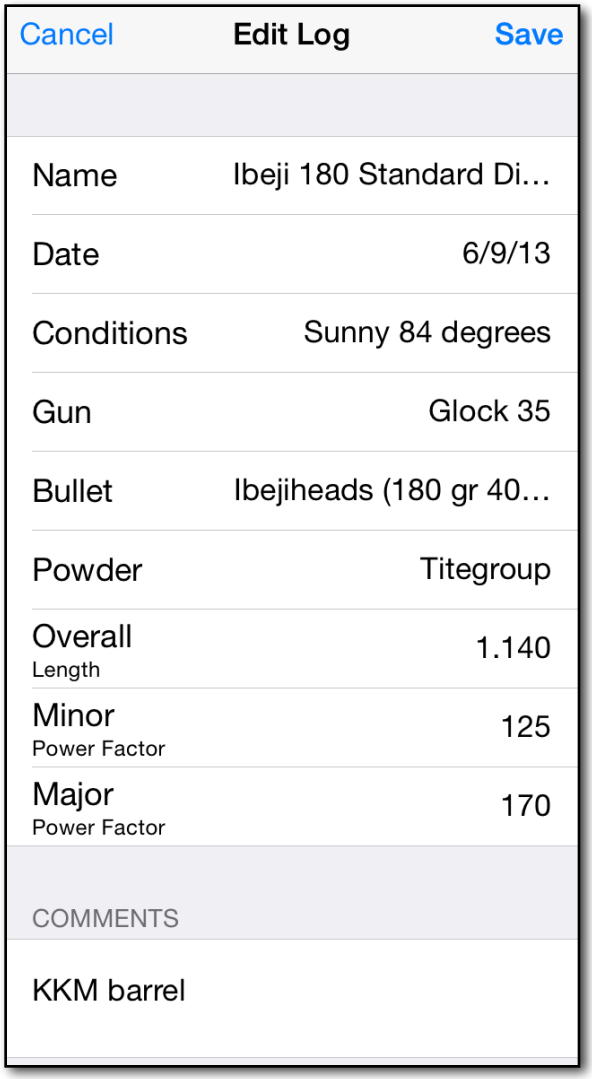
Bullet: Select from your Bullet database.

Powder: Select from your Gun Powder database.

Overall Length (OAL): Make sure to keep track of your OAL for these test loads.

Minor and Major Power Factor: The power factors default from the Settings -> Defaults, but can be overridden here for specific Divisions. For example the Default Major power factor may be 165, but for Standard Division it must be 170. Enter 170 in Major.

Comment: If you want to note anything about the test.



Log Entry

The first thing you will want to add to the Log is the Powder. Tap on the +Barrel icon (lower left). A dialog box will appear that will ask you to “Add Load”. Enter the powder weight in Grains. It will add columns in ascending weight order.

Next you will add the number of rounds to test for the batch by tapping on the +Round button (lower right). In this example 5 rounds were made up with each load. To remove empty Loads or Rounds, tap on the - (minus) button and if the entire row or column is empty it will be deleted.

Colors

Red indicates the load is less than the Minor Power Factor.

Blue indicates the load is in the Minor Power Factor range.

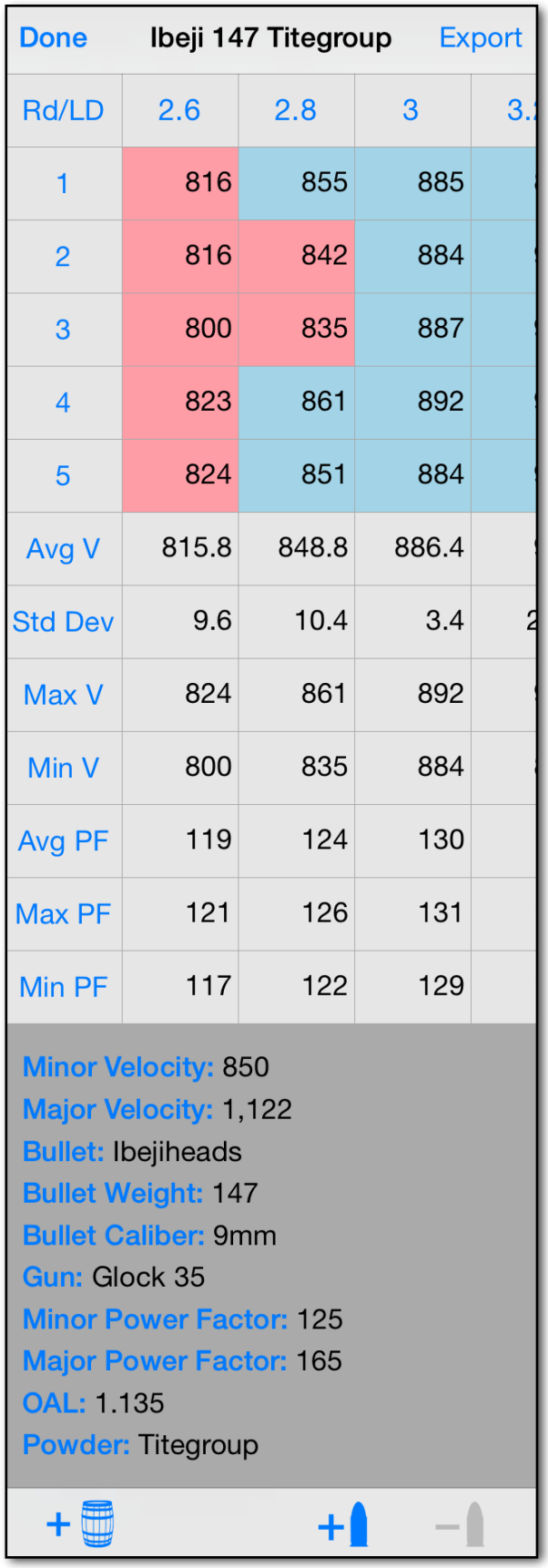
Green indicates the load is over Major Power Factor.

Statistics

Below the entered velocities you will see:

- Average Velocity
- Standard Deviation
- Maximum Velocity
- Minimum Velocity
- Average Power Factor
- Maximum Power Factor
- Minimum Power Factor

These will also be included when Exporting data.



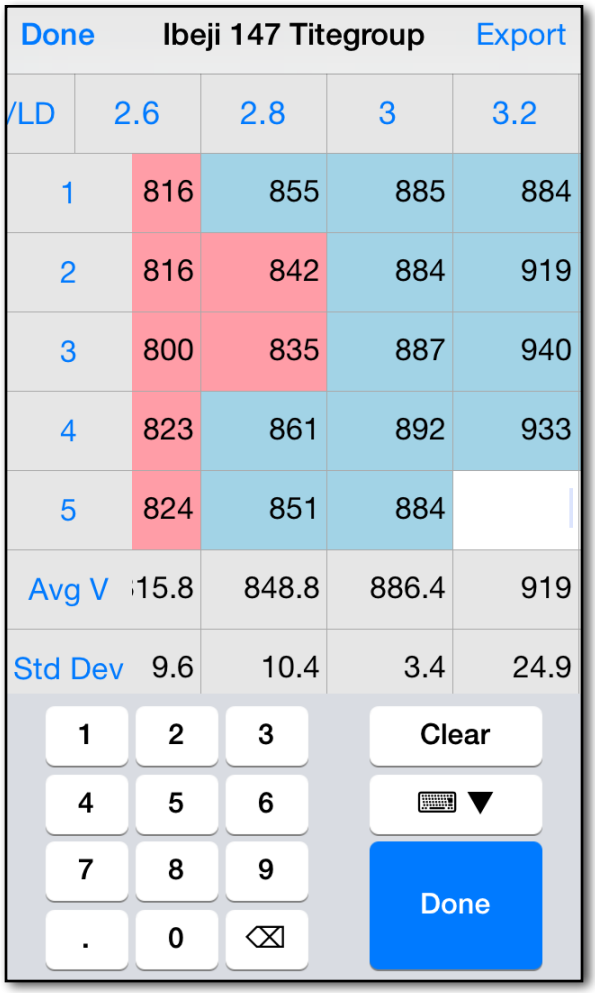
Editing the Velocities

Tap in the box with the first round for the weight you are testing. The keypad will appear below.

In this example, it is ready for entering the 5th round in the 3.2 grains box.

Using the keypad, enter the velocity recorded on the chronograph. When you have finished the last round, the button will say "*Done*" instead of "*Next*" and will hide the keypad when pressed. You can clear an entry by tapping on the *Clear* button. You can hide the keypad by pressing on the button with the *keyboard and down arrow* (between the Clear and Next/Done button).

The program will automatically display the Average, Minimum and Maximum velocities recorded for that load. At the very bottom it will show a summary of all the information, including the velocity it takes to make the minimum Minor and Major Power Factors.



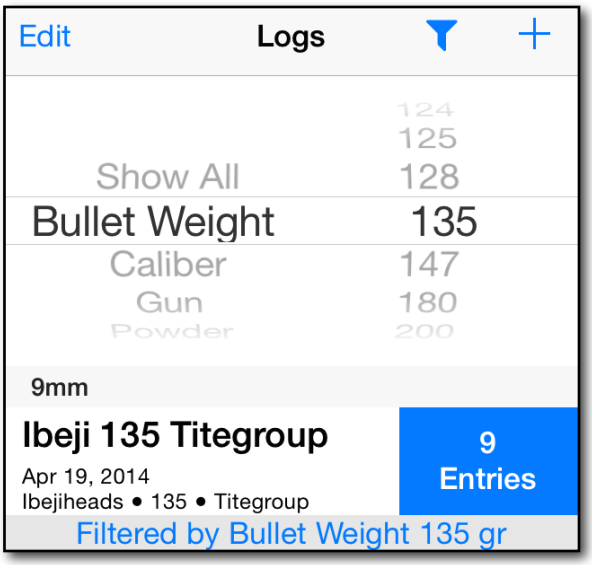
ProChrono with Digital Link

If you have the ProChrono with the "Digital Link" Bluetooth module, the velocities can be transmitted directly into the app. Here is what we recommend. Set the ProChrono to String 1. "Delete String" to make sure all shots are cleared. Next make sure the ProChrono is connected (see settings section above). Select an empty box for it to start logging into. Note: it will **not** overwrite existing entries, so make sure any boxes it needs to fill in are clear (white). It will start from the top and automatically move down for each shot received. Once it has reached the bottom bottom of that powder weight it will close the keyboard and stop logging. Once you have finished a specific column, and you have more loads to record, you will have to select the top of the next column load you want to receive velocities for. If you have missed any entries, for example you forgot to select the blank cells, you will have to manually type the values into the app manually by reading them from the ProChrono screen.

Note: upon occasion when you first turn on the ProChrono and the Chronograph Log app, it may fill in the last recorded velocity in the first box. You may need to clear it.

Filters

The log window can be filtered by a few items. This can help to narrow things down when you have a lot of log entries. By tapping on the Funnel icon (upper right next to + button), it will show the Filter picker. You can filter by:



Show All: Shows all log items.

Bullet Weight: Filter by any of the bullet weights that you have entered in the bullet database.

Caliber: Filter by any calibers that you have entered in the bullet database.

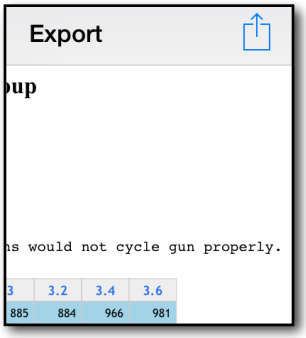
Gun: Filter logs that you have used a certain gun.

Powder: Filter logs by a specific powder that you entered in the powder database.

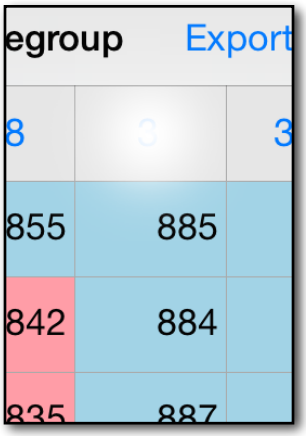
Export

There are a few different ways to export the data.

Whole Table: When in the Log table view the whole table can be exported via Mail by tapping on the Export button (upper right). The table will be displayed on the screen. Tap on the Action button (upper right; square box with upwards arrow). That will show the options to Airdrop (if on an applicable device), Mail, Copy, Print or Open in... The report will be an HTML file, which can be opened with any web browser and some text editors.

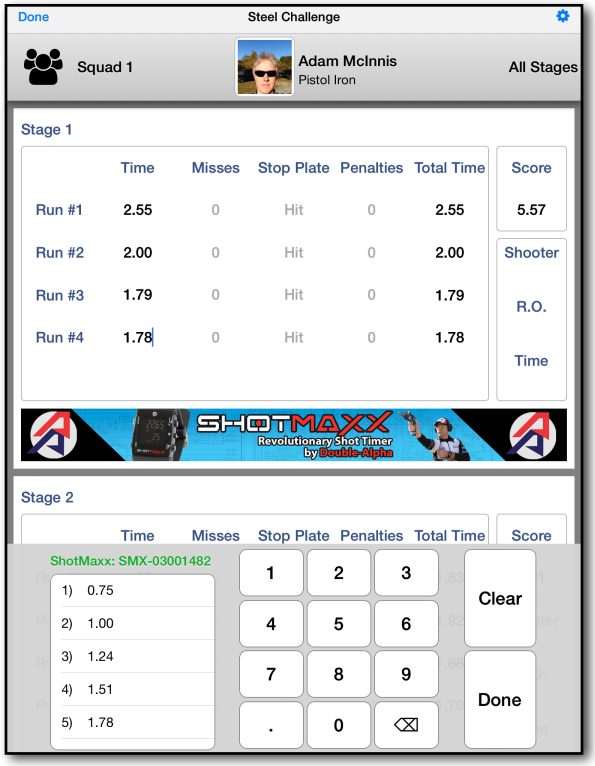


Specific Load: You can "Share" a specific load result via Messages, Mail, Twitter or Facebook. Send your favorite load to your friends or share on Facebook. Tap on the load Column Header. For example tap on the "3" and then tap Share in the dialog box. Select Messages, Mail, Twitter or Facebook. It will export a text version of the results.



Other On-Core applications you might be interested in

Steel Scoring for Apple iPad.



https://itunes.apple.com/us/app/steel-scoring/id733091767?ls=1&mt=8

Steel Scoring was developed to bring Static and Knockdown Steel scoring to the Apple iPad. Steel Scoring can handle the whole event from start to finish. Registration, squadding, scoring and results. Final results are generated in an HTML format that can be uploaded to your clubs website following the event. We've made it easy to use and streamlined for quick scoring. No need to wait for results. You can generate the final results, at the end of the match, right on the iPad.

Steel Scoring features include:

- Free — Thanks to our sponsors!
- Quick and easy entry of new Persons.
- A person can be signed up for one or more divisions.
- Easy Squadding.
- Setup custom Divisions and Stage names for non-official Steel Challenge events.
- Double-Alpha ShotMaxx integration. Times can be sent directly from the ShotMaxx in to the Steel Scoring app. No typing necessary. Note: an iPad 2 or newer is required to communicate with the ShotMaxx Bluetooth timer.
- Times can be quickly entered manually via a Big button keypad.
- Good contrast even in bright sunlight.
- iPad's can be synchronized in one of several different ways: Bluetooth, Wi-Fi or Cloud based (internet).
- Backup to Dropbox.
- Import / Export Persons.

Clubs can setup an Online account on our website for Registration for an event. Contact us for more information.