



FURY[®] HD 5000 AB

LASER RANGEFINDING BINOCULAR

BALLISTICS MANUAL


SET UP

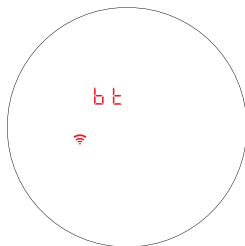
Be sure you have reviewed the Fury® HD 5000 AB Product Manual prior to reading the Ballistics Manual.

Go to your device's app store and download the Vortex Fury HD App.



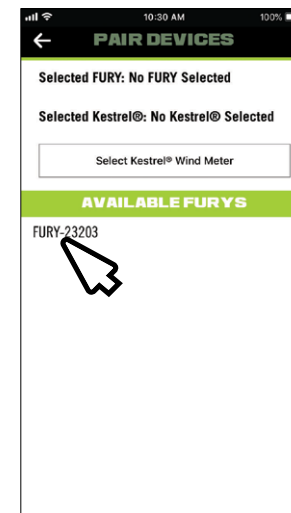
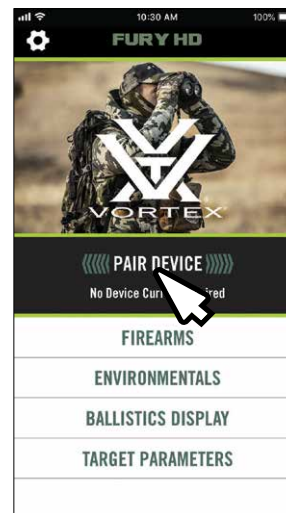
Pairing the Device to the App

1. Press the “Measure” button to turn on the Fury® HD 5000 AB.
2. Ensure your unit is in “BAL” mode (see pg. 7 in the product manual).
3. Go to the Fury® HD 5000 AB's menu (press and hold the “Menu” button on the Fury® HD 5000 AB for two seconds). Press the “Menu” button to cycle through the options. When you see the BT icon, press the “Measure” button. The  symbol will appear indicating that Bluetooth® has been turned on. Make sure your device also has its Bluetooth® functionality turned on to pair wirelessly with the Fury® HD 5000 AB.



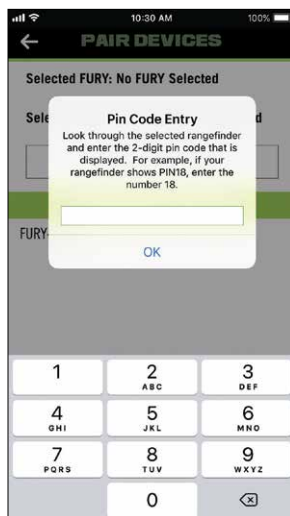
4. Press and hold the “Menu” button for two seconds—until you see the display in the Fury® HD 5000 AB—to leave the menu.
5. Open the Fury HD app and select “Pair Device.” “FURY-XXXXX” will appear in the list. Select “FURY-XXXXX.”

Note: If your Fury® HD 5000 AB does not appear in the “Available FURYS” list, make sure the binocular is in “BAL” mode.

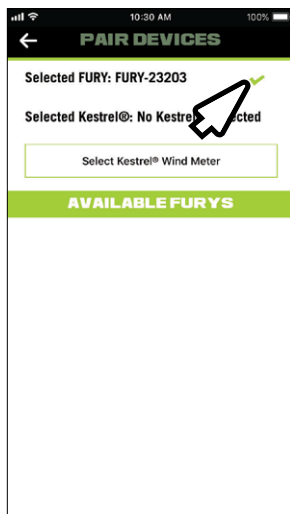


1. A two-digit code will appear in the Fury® HD 5000 AB's digital display. Type this code into the app and press "OK."

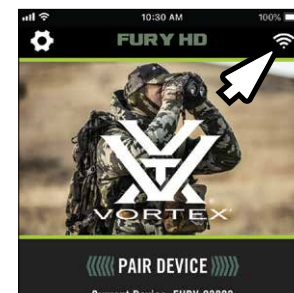
Note: If you do not see the PIN code in the Fury® HD 5000 AB within 20 seconds, press the "OK" button without entering a PIN code. A message will display indicating an incorrect PIN code was entered. Select the Fury® in the "Available Furies" list again. The PIN code will appear in the Fury® HD 5000 AB.



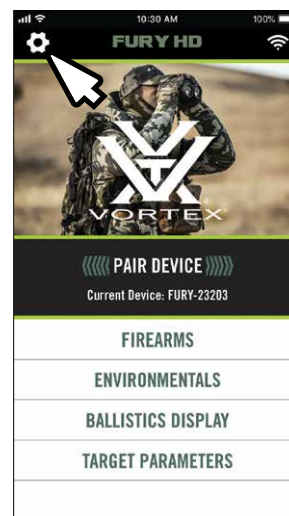
2. A message will appear indicating the Fury HD App and the Fury® HD 5000 AB have paired and you will see the Fury® HD 5000 AB listed as "Selected FURY." Hit the back arrow in the top, left-hand corner of the screen to navigate back to the home screen.



When the Fury HD App and Fury® HD 5000 AB are connected, you will see the WiFi symbol in the app's top right corner. If you do not see this symbol, the Fury HD App and Fury® HD 5000 AB are not connected.

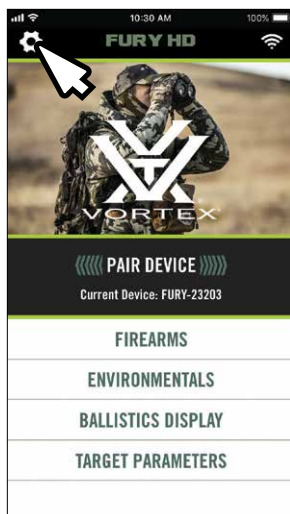


Recommendation: Navigate to "Device Preferences" by going into the "Settings Menu" (⚙️) and select "Keep Devices On" in the Fury HD App while setting up the Fury® HD 5000 AB and the Fury HD App to keep the device and the unit from going to sleep. After initial setup is complete, return "Keep Devices On" to "Off."



SETTINGS MENU

To navigate to the “Settings Menu,” select the settings icon (⚙️) in the upper left corner of the screen. While in the settings page in the Fury HD App, all Fury® HD 5000 AB functionality is disabled. After leaving the settings page, all functionality is restored and changes to settings are saved in the Fury HD App.



The black font indicates the units being used/displayed. To change the units being used/displayed, tap on the desired units.

Weather Units

Temperature

The temperature can be displayed in Celsius (°C) or Fahrenheit (°F). Select either “°C” or “°F” in the “Settings Menu.” The temperature option selected will display in both the app and the binocular.

Pressure

Select if barometric pressure is displayed in inches of mercury (inHg) or millibars (mbar). Select the desired pressure display in the menu. The pressure option selected will display in both the app and the binocular.

Speed

Wind/Target speed can be displayed in miles per hour (mph) or meters per second (m/s). The speed option selected will display in both the app and the binocular.

Density Altitude

The density altitude can be displayed in feet (ft) or meters (m). Select the desired density altitude option in the menu. The density altitude option selected will display in both the app and the binocular.



Solution Units

Distance

The distance to the target can be displayed in Yards (Yds) or Meters. Select the desired distance option in the menu. The distance option selected will display in both the app and the binocular.

Armory Units

Bullet/Gun Specifications

The bullet and gun specifications can be set in standard (in) or metric (cm). This option will set the units used in your ballistic profiles for bullet diameter and length, and the “Firearm Data.” These units are described in further detail in the “Firearms-Ballistic Profiles” section starting on pg. 11.

Muzzle Velocity

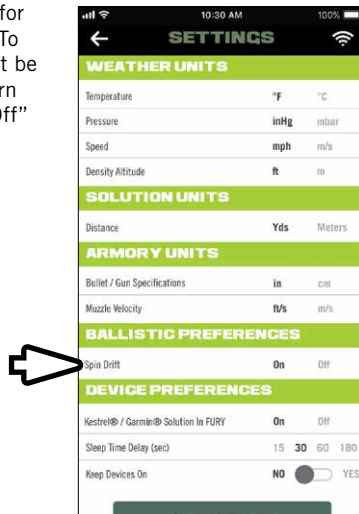
The muzzle velocity can be displayed in either feet per second (ft/s) or meters per second (m/s). Select the desired muzzle velocity option in the menu. The muzzle velocity option selected will display in both the app and the binocular.

Ballistic Preferences

(Only appears in the Fury HD App when connected to a Fury® HD 5000 AB)

Spin Drift

The Fury® HD 5000 AB can account for the effect of spin drift on the bullet. To enable this setting the binocular must be on and paired with your device. To turn “Spin Drift” on/off, select “On” or “Off” from the menu options.



Device Preferences

Kestrel®/Garmin® Solution in FURY®

The “Kestrel®/Garmin® Solution in FURY®” is only used when paired with an Applied Ballistics® equipped Kestrel® or Garmin® device. This is covered in more detail in “Using Fury® HD 5000 AB with an Applied Ballistics® Equipped Kestrel® or Garmin®” section on pg. 41.

Sleep Time Delay

There are four options to program the Fury® HD 5000 AB display to auto-shut off: 15 seconds, 30 seconds, 60 seconds, or 180 seconds. Select the desired sleep time option in the menu. For more information on “Sleep Time Delay,” consult pg. 9 of the Fury® HD 5000 AB product manual.

Keep Devices On

To prevent your device from turning off while using the app, you can select “Keep Devices On.” Select “Yes” to prevent your phone from turning off while using the Fury HD App, or select “No” to allow your phone to shut off while using the App.

Note: The Fury® HD 5000 AB display will remain on until the app is closed, “Keep Devices On” is changed to “No,” or if you turn your device’s screen off.

Calibrating the Compass and Inclinometer

Read steps 1-5 of “Calibrating the Compass and Inclinometer” section before performing the following steps. Vortex® recommends doing the calibration outside, at the location where you will be shooting, prior to initial use. It may take 2-3 cycles of turning the Fury® HD 5000 AB in each direction before it calibrates.

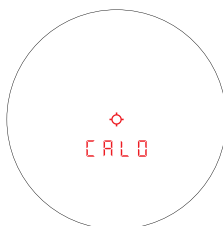
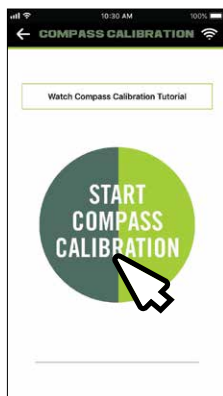
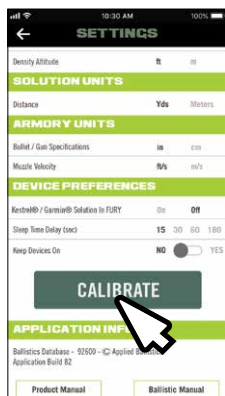
Note: There is a video example in the app to demonstrate proper speed and turning of the Fury® HD 5000 AB for proper calibration. You can also see product videos for the Fury® HD 5000 AB at VortexOptics.com. Search “Fury HD 5000 AB” in the search bar.

Important: Do not hit any buttons on the Fury® HD 5000 AB during this process unless specifically instructed to do so in the following steps.

1. After pairing the device, navigate to the “Settings” page by selecting the “Settings” icon in the upper left corner of the home screen, or if already in the “Settings” page, continue to step 2.



2. To watch a tutorial video on calibrating the Fury® HD 5000 AB, select the “Video Tutorial” button. To begin the calibration process, select the “Calibrate” button, then select the “Start Compass Calibration” button. Ensure you see “CAL 0” in the Fury® HD 5000 AB before proceeding to step 3.



Press the “Measure” button (on the Fury® HD 5000 AB) once and turn the device end over end in all directions. Continue to turn the device end over end for three complete revolutions per axis. Verify the Fury HD App indicates the calibration is complete. If not complete, continue to rotate one revolution per axis until calibration is complete.

STEP 1

Hold bino upright.

SLOWLY FLIP three full revolutions top to bottom.



STEP 2

Hold bino flat.

SLOWLY ROLL three full revolutions right to left.



STEP 3

Hold bino flat.

SLOWLY TWIST three full revolutions counterclockwise.

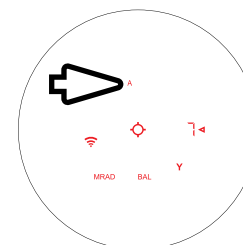


1. Press the “Measure” button (on the Fury® HD 5000 AB) twice to save the calibration.
2. Select the back arrow in the upper left corner of the app to go back to the main menu.

MENU ITEMS

Firearms – Ballistic Profiles

You can have up to three profiles uploaded into the Fury® HD 5000 AB at one time. These profiles are represented by the letters A, B, or C in the upper portion of the Fury® HD 5000 AB display, and are set in the Fury HD App.



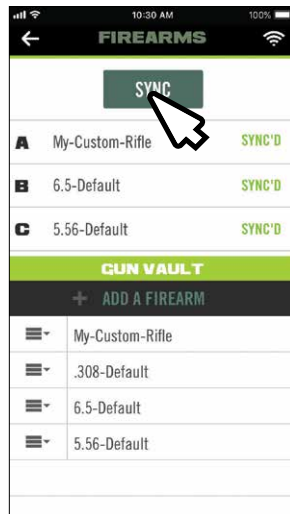
Default Profiles

The Fury® HD 5000 AB binoculars and Fury HD App come preloaded with three default ballistic profiles for some of the most commonly used calibers: .308, 6.5 Creedmoor, and 5.56. The default profiles can be used to determine basic elevation and windage corrections for the default calibers. **The default profiles cannot be edited.** A duplicate can be made from any of the default profiles and then edited. Default profiles cannot be deleted from the Fury HD App. Duplicating and editing profiles is covered in more detail beginning on pg. 20. See the Index starting on pg. 45 for details on the default profiles.

Syncing Profiles to the Binocular

After connecting the Fury® HD 5000 AB binoculars to your device and calibrating the binoculars, you will need to sync the ballistic profiles to the Fury® HD 5000 AB binoculars. The app and the binocular will need to be synced anytime changes are made to the ballistic profiles. The “SYNC” button will only be available (indicated by turning green) when changes have been made to the profiles.

1. Make sure the Fury® HD 5000 AB is on by pressing the “Measure” button.
2. In the app, select “Firearms” from the menu screen.
3. Press the “SYNC” button on the app.
4. The app will indicate the profiles are syncing. Once complete, the profiles will show “SYNC'D.” Syncing profiles is now complete.



Adding Custom Ballistic Profiles

Custom ballistic profiles can also be created in the Fury HD App. The bullet library will be periodically updated with the latest ballistic information from Applied Ballistics®.

To create a custom ballistic profile:

1. Select “Firearms” from the home screen, then select “Add a Firearm.”

2. Name the new profile.
3. To upload the new profile into the Fury® HD 5000 AB, select the profile identifier for the Fury® HD 5000 AB “A,” “B,” or “C” in the “Set As” section, or skip this step to save the profile in the app’s profile list for later use.
4. Enter the bullet data by selecting the “Library.” Select your ammunition’s caliber from the list. Then, select the manufacturer for your bullet, followed by the bullet’s type and weight.

Note: Bullet data may also be added by simply inputting the “Bullet Diameter,” “Bullet Weight,” “Bullet Length,” and “Bullet Coefficient.”

5. Select the bullet’s drag model from the pop-up box. This information may be printed on the box if you are using manufactured bullets. If using custom loads, use the drag model listed on the packaging for your bullet.
Note: If the drag model is not listed on the packaging, this information can usually be found on the manufacturer’s website. For additional information on drag models, see AppliedBallisticsllc.com/education/. After selecting the drag model, you can toggle between G1 and G7.

6. Enter the info in the “Firearm Data” section. The ballistic solution provided by the Fury® HD 5000 AB is only as reliable as the following data provided by the user. Please contact Vortex Optics at 1-800-426-0048 with any questions on the following information:

- **Muzzle Velocity:** Muzzle velocity is the projectile’s speed as it leaves the muzzle, measured in feet per second (FPS) or meters per second (MPS). This information may be printed on your ammunition’s box or found on the manufacturer’s website. The exact FPS/MPS for your firearm can also be measured with the use of a chronograph for the most accurate results.
- **Zero Range:** The range at which you have zeroed your rifle.
- **Sight Height:** Height from the center of the rifle bore to the center of the optic. The measurement units can be set to standard or metric in the “Settings” menu.

- **Zero Height:** Vertical offset from the point of aim at your zero distance. The measurement units can be set to standard or metric in the “Settings” menu.
- **Zero Offset:** Horizontal offset from the point of aim at your zero distance. The measurement units can be set to standard or metric in the “Settings” menu.
- **Twist Rate:** This information may be marked on the rifle barrel, or on the manufacturer’s website. The twist rate will default to 11.25". Update the twist rate to match your rifle.

Note: To toggle between right twist (IN R) and left twist (IN L), tap the “IN R” or “IN L” button. If the twist direction is not known, use “in-R.” The measurement units can be set to standard or metric in the “Settings” menu.
- **Sight Units:** MOA or MRAD (MIL).

Advanced Settings:

You don’t have to change the following settings. These settings need to be made in the field and won’t apply to most shooters. If not adjusting the following settings, skip to step 6.

- **SSF (ELEV) / SSF (WIND):** Sight Scale Factor is used to account for any inconsistencies in turret tracking. Default is set at “1.00,” indicating there is no tracking inconsistency. SSF is calculated using a live fire test and one of four formulas depending on your range units (yards or meters) and your adjustment units (MOA or MRAD). For more detailed information, and the formulas used to calculate SSF, please reference the “Tall Target Test (Scope Calibration)” here: AppliedBallisticsLLC.com/education/
- **Muzzle Velocity Temperature Table:** You can enter a custom muzzle velocity temperature table. The use of a chronograph is required for this information. Enter the ambient temperature in the left column, and the muzzle velocity measured by the chronograph in the right column. Vortex® recommends entering at least two temperatures with corresponding muzzle velocities. For best results, each temperature entry should increase/decrease by at least 10 degrees.

Calibrate Custom Drop Scale Factor:

Calibrating a custom Drop Scale Factor (DSF) is not required and is an optional function. A user may calibrate the ballistic solution based on observed bullet drop at range.

DSF is a Ballistic Calibration performed in the subsonic velocity region. This calibration is performed in the field using observed bullet drop on a known distance target. For more detail, refer to AppliedBallisticsLLC.com/education/.

To calibrate DSF:

- Ensure the Fury® HD 5000 AB is powered on by pressing the “Measure” button, and your device is paired with the binocular.
- In the app, navigate to the “Firearms” screen. In the bottom half of the screen, select the menu icon next to the ballistic profile you wish to update, and select “Edit Firearm.”
- Press the “CAL” button in the upper right corner of the screen.

FIREARM DATA		
Zero Height	1.75	IN
Zero Offset	0.00	IN
Twist Rate	1: 11.25	IN R
SSFV	1.00	
SSFH	1.00	
Sight Units	MOA	MIL

MV-TEMP TABLE		
MV-TEMP	° F	° FPS
	0	0
	0	0
	0	0
	0	0
	0	0

DSF (NO CAL) CLEAR

- d. Once in the “Calibration” screen, enter your target’s range and the total amount of bullet drop in MOA or MRAD needed to put your point of impact on your point of aim for Range 1. The default range listed is based on the ballistic data you have provided up to this point. Overwrite the default range with your target’s actual range. Before entering your measured drop data, press “SIGN (-)” to zero out the “---.”

10:30 AM 100%

← CALIBRATION

ENTER UP TO 2 RANGES AND THE DROP

RANGE 1 954 - 1086 YDS	
RANGE	1020 Yds
DROP	--- MIL

RANGE 2 1399 YDS	
RANGE	1400 Yds
DROP	--- MIL

CALCULATE

CALIBRATION RESULTS

CURRENT 2700 --- FPS SET MV

DROP SCALE FACTOR --- SET DSF

- e. Shoot your rifle at a second target at a different range. Input the range and total amount of bullet drop in MOA or MRAD needed to put your point of impact on your point of aim for Range 2. The default range listed is based on the ballistic data you have provided up to this point. Overwrite the default range with your target’s actual range. Before entering your measured drop data, press “SIGN (-)” to zero out the “---.”

10:30 AM 100%

← CALIBRATION

ENTER UP TO 2 RANGES AND THE DROP

RANGE 1 954 - 1086 YDS	
RANGE	1020 Yds
DROP	--- MIL

RANGE 2 1399 YDS	
RANGE	1400 Yds
DROP	--- MIL

CALCULATE

CALIBRATION RESULTS

CURRENT 2700 --- FPS SET MV

DROP SCALE FACTOR --- SET DSF

- f. Press the “Calculate” button to see the calibration results.

- g. To update Muzzle Velocity, press the “Set MV” button. Or, to update the Drop Scale Factor, press the “Set DSF” button.

- h. Press the back arrow in the upper left corner of the screen.

7. Once all the desired information has been included, tap the “SAVE” button on the upper right corner of the “Firearms” screen. If no profile identifier (A, B, or C) was selected in step 3, set up is complete.

10:30 AM 100%

← EDIT FIREARM CAL SAVE

PROFILE My Custom Rifle

SET AS A B C

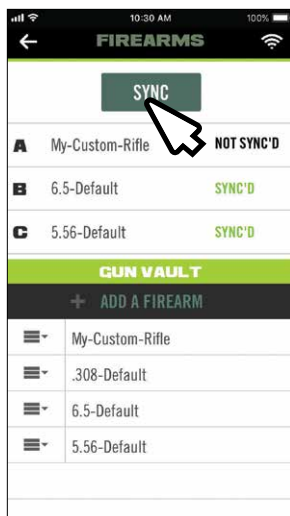
Bullet Data LIBRARY

Bullet Diameter	0.264 IN
Bullet Weight	140 GR
Bullet Length	1.380 IN
Bullet Coeff	0.568 G1

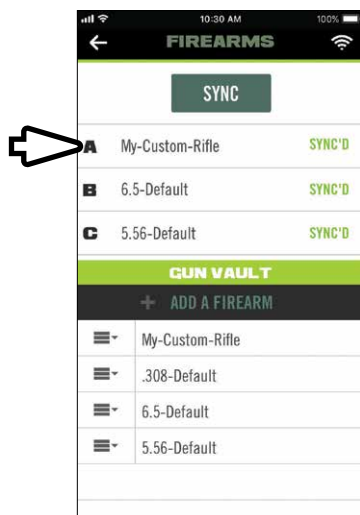
FIREARM DATA

Muzzle Velocity	2700 FPS
Zero Range	100 Yds
Sight Height	1.75 IN
Zero Height	0.00 IN
Zero Offset	0.00 IN
Twist Rate	1: 11.25 IN R
SSFV	1.00
SSFH	1.00

8. If a profile identifier (A, B, or C) was selected to upload the new profile to the binocular, you will need to sync the profile with the Fury® HD 5000 AB. Tap the “SYNC” button in the Fury HD App at the top of the screen.



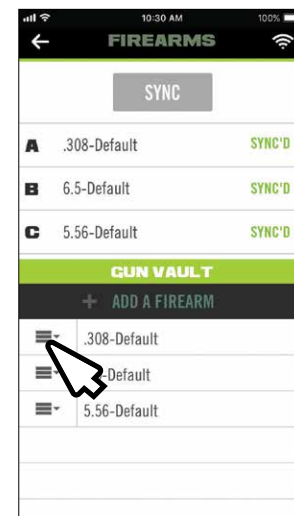
9. Once loaded, the new ballistic profile will be represented by the profile identifier you selected in step 3. This profile will now reflect the ballistic data for your custom load.



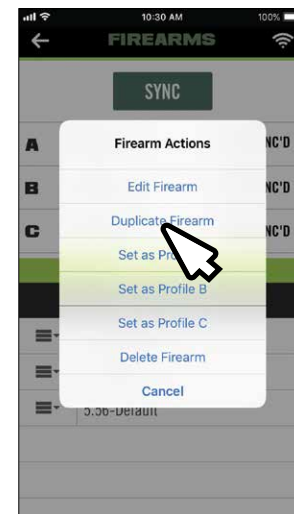
Duplicating a Profile

To duplicate a profile:

1. Select the menu options icon to the left of the profile you want to duplicate.



2. Select the “Duplicate Firearm” option.

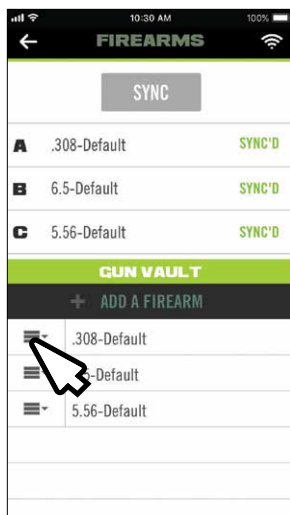


3. Once a profile has been duplicated, the profile will automatically rename with the addition “-copy” at the end of the profile name. If desired, rename and sync the profile using the steps in the following section.

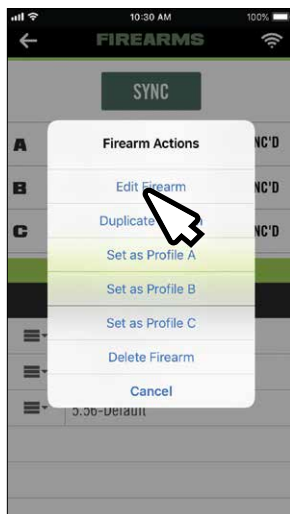
Editing a Profile

Profiles can be edited to update specific data to most accurately represent the ballistic information for your firearm and ammunition. To edit a ballistic profile:

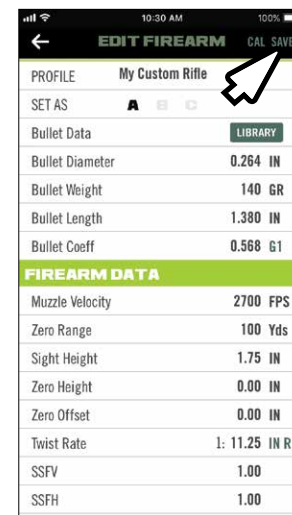
1. In the bottom half of the “Firearms” screen, select the menu options icon (≡) to the left of the profile you want to edit.



2. Select “Edit Firearm.”



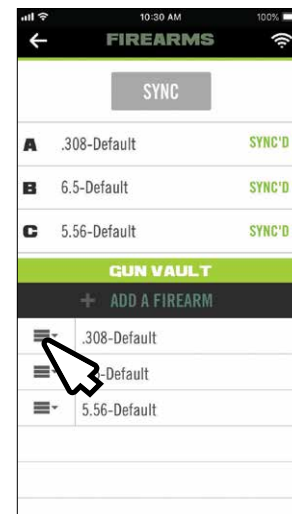
3. Name the new profile something unique.
4. Update the data points for your firearm and ammunition.
5. Save the new profile by pressing the “SAVE” icon in the upper, right-hand corner of the screen.
6. Sync profile to Fury® HD 5000 AB.



Setting Up the Profile

You can change the identifier (A, B, or C) assigned to a profile in the Fury HD App:

1. Select the menu options icon (≡) to the left of the profile.



2. Select the desired profile (e.g. A, B, or C).



3. Press the “SYNC” button at the top of the Fury HD App.

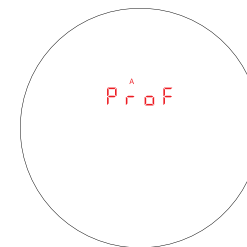
Switch Between Profiles in Fury® HD 5000 AB:

There are two methods to switch between the profiles.

1. Press and hold the “Menu” button on the Fury® HD 5000 AB for two seconds.



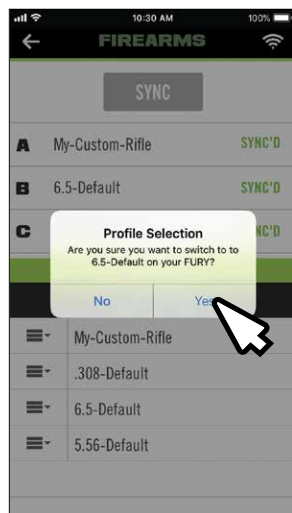
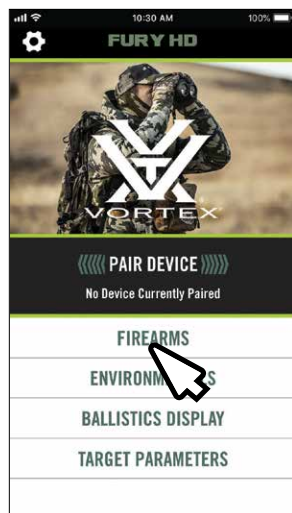
2. Cycle through the menu by repeatedly pressing the “Menu” button until you come to “Prof.”



3. Press the “Measure” button to switch between profiles until you come to the desired profile.
4. Press and hold the “Menu” button for four seconds to exit the menu and return to the ranging mode.

Switch between profiles in Fury HD App:

1. Ensure the Fury® HD 5000 AB is on by pressing the “Measure” button.
2. From the home screen in the Fury HD App, select “Firearms.”
3. Select the desired profile (A, B, or C) from the list.
4. A “Profile Selection” pop-up screen will appear asking if you want to switch to the selected profile on your Fury® HD 5000 AB. Select “Yes.”



Deleting a Profile/Firearm

To delete a firearm from the Fury HD App:

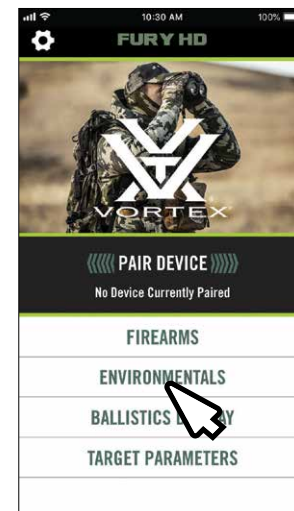
1. Select the menu options icon (≡) to the left of the profile you want to delete.
2. Select “Delete Firearm” from the options list.

Environmentals

From the home screen, navigate to the “Environmentals” page by pressing the “Environmentals” button.

The Fury® HD 5000 AB comes with onboard environmental sensors to capture the following data:

- Direction (compass)
- Temperature (thermometer)
- Angle of incline (inclinometer)
- Pressure (barometer)
- Humidity (hygrometer)



Wind Modes

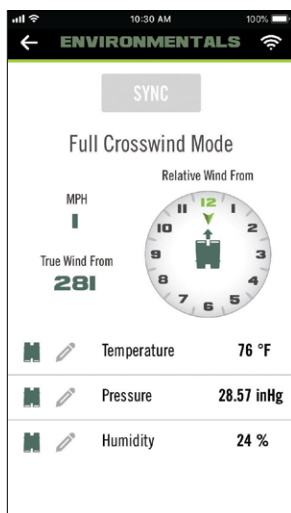
When calculating wind/drop solutions in “BAL” Mode, it will be necessary to account for wind. The Fury® HD 5000 AB uses two methods to manually input wind information.

If desired, select the manual entry option (✎) to enter Temperature, Pressure, and Humidity into the Fury HD App.

Note: The environmentals will not update from the Fury® HD 5000 AB as long as manual entry is selected.

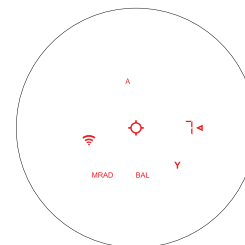
Full Crosswind Mode

The Fury® HD 5000 AB comes pre-set in “Full Crosswind” Mode. When in “Full Crosswind” Mode, the Fury® HD 5000 AB will assume any wind speed is coming from either the full 9 o'clock position (wind blowing from left to right) or full 3 o'clock position (wind blowing from right to left).



Entering the wind speed:

1. Make sure you are in “BAL” Mode. Press the “Measure” button to turn on the Fury® HD 5000 AB.
2. Press either the right-hand arrow button “>” or the left-hand arrow “<” button to increase the wind speed until the correct wind speed/direction is displayed.



- The right-hand arrow button “>” indicates the wind is blowing from the 3 o'clock position.
- The left-hand arrow button “<” indicates the wind is blowing from the 9 o'clock position.



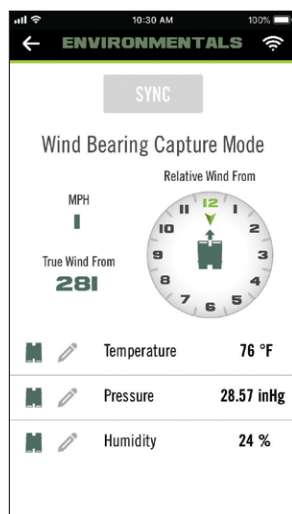
- To decrease the wind speed, press the opposite wind direction button until the correct wind speed/direction is displayed.
- To remove the wind speed (indicating no wind), press the arrow button opposite what is displayed until the 0 is displayed. Or, press and hold both wind direction buttons simultaneously for one second to zero the wind speed/direction. The wind speed/direction number will flash to indicate the wind speed/direction has been zeroed.

3. Press the “Measure” button to take the target’s range.

Wind Bearing Capture Mode

The Fury® HD 5000 AB is equipped with the Vortex® patent pending “Wind Bearing Capture” Mode. Holding the “Wind Bearing Capture” button for two seconds will change from “Full Crosswind” Mode into “Wind Bearing Capture” Mode. When in “Wind Bearing Capture” Mode, the Fury® HD 5000 AB will keep track of wind direction regardless of the direction the user is facing.

Note: Be sure that the Fury® HD 5000 AB compass has been properly calibrated (see pg. 10) before attempting to use the “Wind Bearing Capture” Mode.



Establishing the Wind Bearing and Ranging:

1. Press the “Measure” button to turn on the Fury® HD 5000 AB.
2. Press and hold the “Wind Bearing Capture” button for two seconds until the Fury® HD 5000 AB goes to the “Wind Bearing Capture” display. The bearing and wind speed/direction will flash when switching between “Wind Bearing Capture” Mode and “Full Crosswind” Mode.



3. While looking through the Fury® HD 5000 AB, position yourself into the wind so you feel the wind directly on your face. Press the “Wind Bearing Capture” button once to capture wind direction.
4. Use the right-hand arrow button (▶) to increase the wind speed until the correct speed is displayed. To reduce the wind speed, use the left-hand arrow button (◀) until the desired wind speed is displayed, or until wind speed is back to zero. Or, press and hold both wind direction buttons simultaneously for one second to zero the wind speed and direction.

Note: Because “Wind Bearing Capture” Mode tracks wind direction using the onboard compass, wind speed is only increased using the right-hand arrow button (▶) and decreased using the left-hand arrow button (◀).

5. Press the “Measure” button once. The Fury® HD 5000 AB will display the range/incline and wind/drop solution accounting for wind direction and speed.
6. If the wind changes direction the user must repeat steps 3 - 5.

Note: The ballistics solution will not update until another range measurement has been taken.

Ballistics Display

The “Ballistics” display in the Fury HD App will show the wind/bullet drop solutions after a range has been taken. You can also see the wind/bullet drop solution in the Fury® HD 5000 AB binocular display. All environmental data can be seen in the bottom half of the screen in the app for use in DOPE records. The following data points can be changed to their alternate display options in the “Settings” menu of the Fury HD App by selecting the settings icon in the upper left corner of the home screen.

Note: If pairing with a Kestrel®, the Kestrel's® environmental sensors will be used to determine wind/bullet drop solutions. The Kestrel's® ballistic profile data may be used, if permitted, via the settings page.

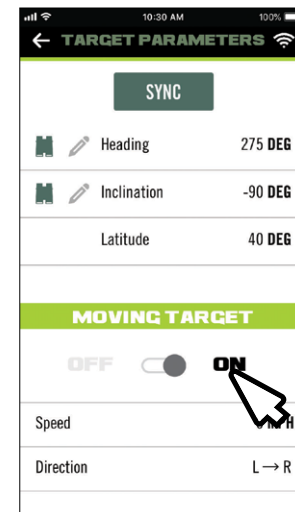
- **Muzzle Velocity:** Input from the bullet load in “Firearms.”
- **Temperature:** Ambient temperature taken by the temperature sensor in the Fury® HD 5000 AB. Available in °F or °C.
- **Pressure:** Barometric pressure taken by the barometric pressure sensor in the Fury® HD 5000 AB. Available in inHg or mbar.
- **Density Altitude:** The relative altitude at a location compared to sea level, with standard atmospheric conditions, factoring in current atmospherics such as temperature, atmospheric pressure, and humidity.
- **Energy:** Bullet energy delivered at the target.
- **Velocity:** Bullet velocity at the target.

Target Parameters

Any time changes are made to the target parameters in the Fury HD App, you must sync the Fury HD App and binoculars or the information will not be included when the Fury® HD 5000 AB calculates the wind/bullet drop solution.

- **Heading:** The direction of your orientation (e.g. North, South, East, West). You can use the direction indicated by the compass in the Fury® HD 5000 AB or you can manually enter the data.
- **Inclination:** The angle at which you will be shooting. You can take the inclination determined by the Fury® HD 5000 AB or you can manually enter the inclination.
- **Latitude:** Your geographical position. This data is only entered via the Fury HD App and must be edited manually.
- **Moving Target:** To turn the “Moving Target” option on/off, select “Target Parameters” on the home screen and press the “On” or “Off” icon. After turning the “Moving Target” option on/off, press the “SYNC” button on the Fury HD App. When turned on, the “Speed” and “Direction” options will be enabled.

- **Speed:** Manually enter the speed at which the target is moving.
- **Direction:** Manually enter the target's direction of travel.



PAIRING AN APPLIED BALLISTICS® EQUIPPED KESTREL® WITH THE FURY® HD 5000 AB

Set the Fury® HD 5000 AB to BAL Mode:

To use the Fury® HD 5000 AB with a Kestrel®, the binocular must be in “BAL” Mode. If already in “BAL” Mode, skip steps 1-3 below.

1. Press and hold the “Menu” button on the Fury® HD 5000 AB for two seconds.
2. Press the “Measure” button to change from “HCD” to “BAL” Mode.
3. Press and hold the “Menu” button for four seconds to exit the menu.

When a Fury® HD 5000 AB and Kestrel® are paired, the Kestrel® will always have control of the environmental data (wind bearing, wind speed, temperature, pressure, and humidity). The Fury® HD 5000 AB will provide the target’s range, inclination angle, and target bearing to an Applied Ballistics® equipped Kestrel®. This data will be used to calculate the wind/bullet drop solution.

When pairing with a Kestrel®, any changes to settings must be made in the menu options of the Fury® HD 5000 AB or using the Fury HD App prior to pairing.

How to Pair:

To set up an Applied Ballistics® equipped Kestrel® to allow it to be paired to another device, please reference your Kestrel® user manual.

Note: The Fury AB App will need to be closed prior to pairing. Once paired with a Kestrel®, the binocular will disconnect from the Fury HD App. Once the Kestrel® is turned off or goes to sleep, the binocular and the Fury HD App will be reconnected.

1. Make sure the Fury® HD 5000 AB is powered on, and the Fury HD App is closed.

Note: If you previously turned on the “Keep Devices On” setting in the Fury HD App, once the app is off/disconnected this setting will no longer apply. The Fury® HD 5000 AB will now auto shut-off at the specified time setting. It is helpful to set the Fury® HD 5000 AB to the “180 second” time setting while pairing with a Kestrel®. See page 9 of the product manual for how to adjust the time setting.

2. Ensure that the Kestrel® is set to “Device” Mode in the Bluetooth® settings and search for new devices.

3. Select your Fury® HD 5000 AB from the list on the Kestrel®.
4. The Fury® HD 5000 AB and Kestrel® are now paired.

Note: Kestrel® has a 25-yard minimum range. If ranging a target at 25 yards or less, the Kestrel® will display the following message: “Unusable target data received.”

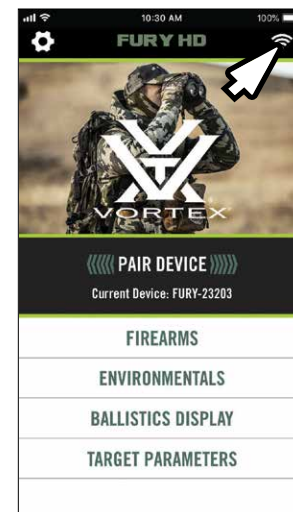
USING FURY® HD 5000 AB WITH AN APPLIED BALLISTICS® EQUIPPED KESTREL®

There are two options available when using the Fury® HD 5000 AB with an Applied Ballistics® equipped Kestrel®. The Fury® HD 5000 AB and Kestrel® can independently calculate the wind/bullet drop solution, or the Fury® HD 5000 AB can mirror the solution calculated by the Kestrel®.

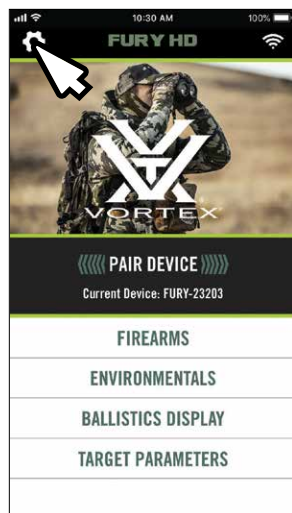
Selecting the Fury® HD 5000 AB or Kestrel® as the Solution Solver:

If connected:

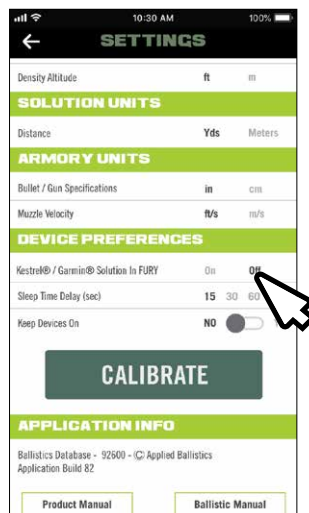
1. Disconnect the Kestrel® from the Fury® HD 5000 AB.
2. Open the Fury HD App on your device and ensure the device and the Fury® HD 5000 AB are connected.



3. Select the “Settings” icon (⚙️) in the upper, left-hand corner.



4. Set “Kestrel® Solution in Fury” to “On” or “Off” to determine the ability of the Kestrel® to calculate and display the solution in the Fury® HD 5000 AB.



- **“Kestrel®/Garmin® Solution in FURY®” is On (Kestrel® Mode)**

When the solution is set to “On,” the Kestrel® calculates the ballistic solution using the ballistic profile in the Kestrel® and the range, bearing, and angle data from the Fury® HD 5000 AB. The ballistic solution displayed on the Kestrel® is also displayed in the Fury® HD 5000 AB. Since the Kestrel® is in control of the firearm selection and computing the ballistic solution, the ballistic profile information in the Fury® HD 5000 AB is disabled. The profiles A, B, and C and the MRAD/MOA indicators are removed from the display of the Fury® HD 5000 AB binoculars.

- **“Kestrel®/Garmin® Solution in FURY®” is Off – Default Setting**

When the solution is set to “Off,” the Fury® HD 5000 AB sends the range, bearing, and angle data to the Kestrel®. The Kestrel® provides the wind bearing, wind speed, temperature, pressure, and humidity data to the Fury® HD 5000 AB, and each unit calculates its own ballistic solution. This mode is particularly useful when shooting multiple calibers at the same time, or when shooting with a partner using a different caliber rifle or different reticle/turret configurations (e.g. MOA vs MRAD). It is important to ensure you are using the correct ballistic data for the device you are using for your wind/bullet drop solutions.

Note: The “Wind Bearing Capture” button and the left/right wind direction buttons are disabled on the Fury® HD 5000 AB when connected to an Applied Ballistics® equipped Kestrel®.

5. Use the back arrow at the top left of the screen to navigate back to the home screen.
6. Close the Fury HD App.
7. Reconnect the Kestrel® to the Fury® HD 5000 AB.

PAIRING A KESTREL® (WITHOUT APPLIED BALLISTICS®) WITH THE FURY® HD 5000 AB

Set the Fury® HD 5000 AB to BAL Mode:

To use the Fury® HD 5000 AB with a Kestrel®, the binocular must be in “BAL” Mode. If already in “BAL” Mode, skip steps 1-3 below.

1. Press and hold the “Menu” button on the Fury® HD 5000 AB for two seconds.
2. Press the “Measure” button to change from “HCD” to “BAL” Mode.
3. Press and hold the “Menu” button for four seconds to exit the menu.

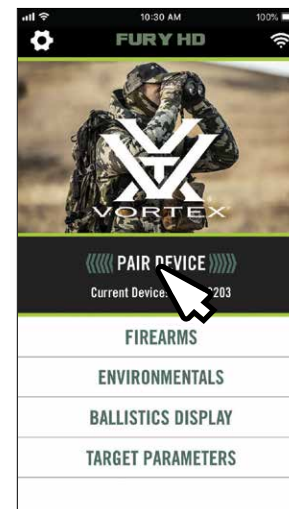
When a Fury® HD 5000 AB and Kestrel® are paired together, the Kestrel® will always have control of the environmental data (wind bearing, wind speed, temperature, pressure, and humidity). This data will be used to calculate the wind/bullet drop solution.

When pairing with a Kestrel®, any changes to settings must be made in the menu options of the Fury® HD 5000 AB or using the Fury HD App prior to pairing.

Follow these steps to pair a Kestrel® to the Fury® HD 5000 AB, or when pairing an Applied Ballistics® equipped Kestrel® when in “Weather” Mode.

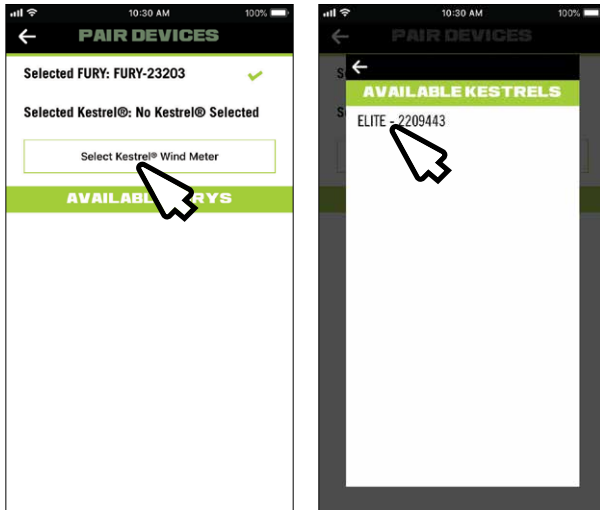
Note: The Fury® HD 5000 AB and Fury HD App are not compatible with Kestrel® Drop.

1. Open the Fury HD App on your device and set your Kestrel® to “PC/Mobile” mode in the Bluetooth® settings.
2. Select “Pair Device” in the Fury HD App.

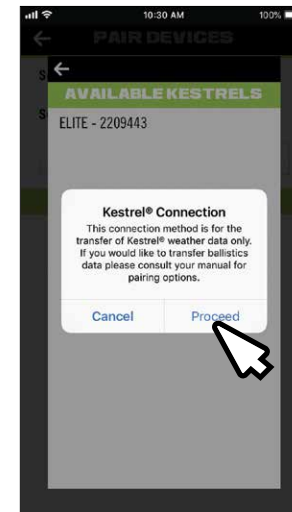


3. Select “Select Kestrel® Wind Meter.” Your Kestrel® should appear in the “Available Kestrels” list.

Note: If your Kestrel® does not appear in the list, toggle the Kestrel® Bluetooth® OFF and ON. The Kestrel® should appear in the list.



4. Select your Kestrel® from the list. A pop-up box will appear. Select “Proceed.”



USING THE FURY® HD 5000 AB WITH A KESTREL® (WITHOUT APPLIED BALLISTICS®)

Capturing Wind Data:

Kestrel® offers a variety of broadcast settings to send wind data to another device. Vortex® recommends setting your Kestrel® to broadcast wind data at the shortest possible interval.

1. Press the “Measure” button to power on the Fury® HD 5000 AB.
2. While holding the Kestrel® into the wind, press the “Wind Bearing Capture” button on the Fury® HD 5000 AB.



3. The Fury® HD 5000 AB will now use the wind direction and speed captured from the Kestrel® to calculate ballistics solutions.

Note: To view the environmental data from the Kestrel® (or Applied Ballistics® equipped Kestrel® set to “Weather” Mode) in the Fury HD App, go to the “Environmentals” page.

4. If the wind changes speed or direction, repeat steps 1 and 2.
5. Every time you press the “Measure” button on the Fury® HD 5000 AB, it will calculate the wind/bullet drop solution using the last wind speed and direction received from the Kestrel®.

Note: The left/right wind direction buttons are disabled on the Fury® HD 5000 AB while connected to a Kestrel® (without Applied Ballistics®) or an Applied Ballistics® equipped Kestrel® set to “Weather” Mode.

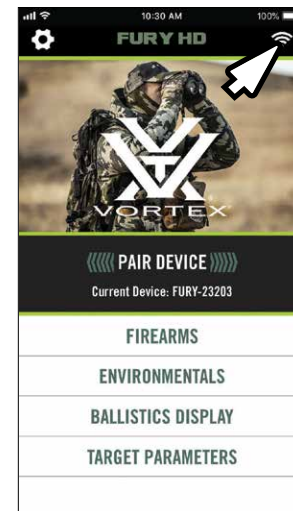
USING FURY® HD 5000 AB WITH AN APPLIED BALLISTICS® EQUIPPED GARMIN®

There are two options available when using the Fury® HD 5000 AB with an Applied Ballistics® equipped Garmin®. The Fury® HD 5000 AB and Garmin® can independently calculate the wind/bullet drop solution, or the Fury® HD 5000 AB can mirror the solution calculated by the Garmin®.

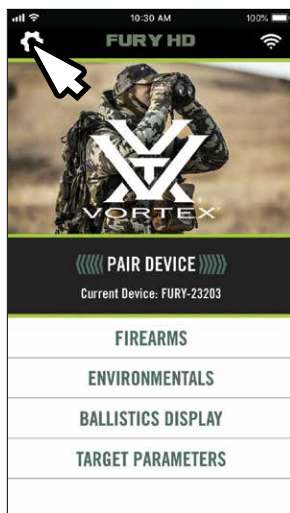
Selecting the Fury® HD 5000 AB or Garmin® as the Solution Solver:

If connected:

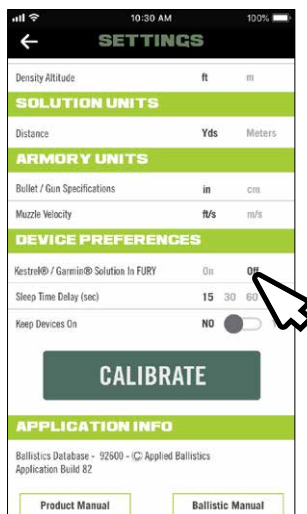
1. Disconnect the Garmin® from the Fury® HD 5000 AB
2. Open the Fury HD App on your device and ensure the device and the Fury® HD 5000 AB are connected.



3. Select the “Settings” Icon (⚙️) in the upper, left-hand corner.



4. Set “Kestrel® / Garmin® Solution in FURY” to “On” or “Off” to determine the Garmin's® ability to calculate and display the solution in the Fury® HD 5000 AB.



- **“Kestrel® / Garmin® Solution in FURY®” is On (Garmin® Mode)**

When the Garmin® solution is set to “On,” the Garmin® calculates the ballistic solution using the ballistic profile in the Garmin® and the range, bearing, and angle data from the Fury® HD 5000 AB. The ballistic solution displayed on the Garmin® is also displayed in the Fury® HD 5000 AB. Since the Garmin® is in control of the firearm selection and computing the ballistic solution, the ballistic profile information in the Fury® HD 5000 AB is disabled. The profiles A, B, and C and the MRAD/MOA indicators are removed from the display of the Fury® HD 5000 AB binoculars.

- **“Kestrel®/Garmin® Solution in FURY®” is Off - Default Setting**

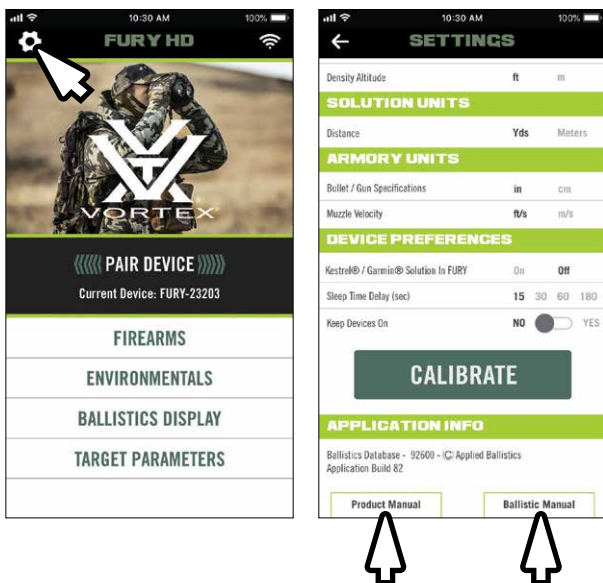
When the Garmin® solution is set to “Off,” the Fury® HD 5000 AB sends the range, bearing, and angle data to the Garmin®. The Garmin® and Fury® HD 5000 AB calculate their own independent solution. This mode is particularly useful when shooting multiple calibers at the same time, or when shooting with a partner using a different caliber rifle or different reticle/turret configurations (e.g. MOA vs MRAD). It is important to ensure you are using the correct ballistic data for the device you are using for your wind/bullet drop solutions.

Note: The “Wind Bearing Capture” button and left/right wind direction buttons are disabled on the Fury® HD 5000 AB when connected to an Applied Ballistics® equipped Garmin®.

5. Use the back arrow at the top left of the screen to navigate back to the home screen.
6. Close the Fury HD App.
7. Reconnect the Garmin® to the Fury® HD 5000 AB.

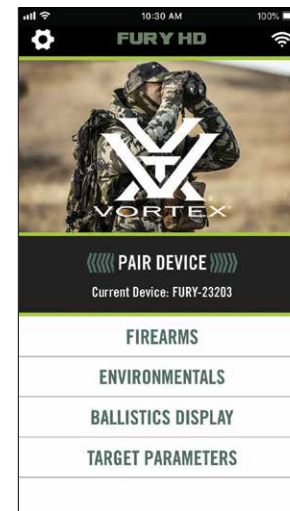
TROUBLESHOOTING GUIDE

- For details about using the Fury® HD 5000 AB and/or the Fury HD App, you can find the full product manual and the ballistics manual in the Fury HD App.
- Navigate to the “Settings” page by clicking on the cogwheel (⚙️) in the upper left corner, then scroll to the bottom of the page.
- Both manuals are located in the “Application Info” section.



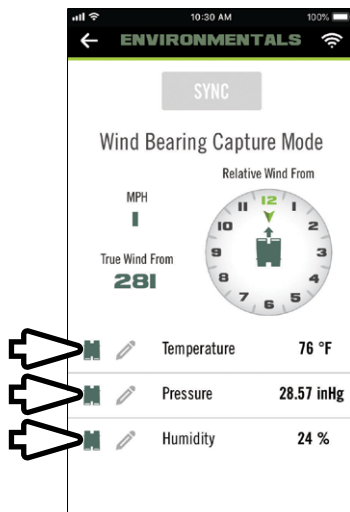
- The Fury® HD 5000 AB will not show up in the Fury HD App in my device.
- Bluetooth® chips of a certain age may not be able to communicate with modern devices. Devices such as iPhone 6 and older, or Android 6.0 and older, may not work with the Fury® HD 5000 AB.

- I have paired my Fury® HD 5000 AB with my device, but they are not communicating.
- If you have successfully paired before, and the device and Fury® HD 5000 AB will not communicate, toggle Bluetooth® on and off on both your device and on the Fury® HD 5000 AB.
- Ensure you see the connected symbol in the upper right corner of the Fury® HD 5000 AB.



- If the Applied Ballistics® equipped Kestrel® will not provide a solution to the Fury® HD 5000 AB, verify the Kestrel® is in “Ballistics” Mode.
- If the compass will not calibrate. Ensure you are calibrating the compass outside and away from buildings, cell towers, or other structures.
- If the Fury® HD 5000 AB calibration is off, then repeat the calibration sequence and ensure that the device is rotated three times per axis before completing the calibration process. The Fury® HD 5000 AB will need to be recalibrated after replacing the battery and when changing geographic location.

- If the Fury® HD 5000 AB is not updating pressure or temperature then verify that you have the Fury® selected on the “Environmentals” screen.



INDEX

PROFILE		5.56 - DEFAULT	
SET AS	A B C		
BULLET DATA	Library		
BULLET DIAMETER	0.224 in.		
BULLET WEIGHT	62 gr		
BULLET LENGTH	0.994 in.		
BULLET COEFFICIENT	0.291 G1		
FIREARM DATA			
MUZZLE VELOCITY	2800 FPS		
ZERO RANGE	100 yds.		
SIGHT HEIGHT	1.75 in.		
ZERO HEIGHT	0.00		
ZERO OFFSET	0.00 in.		
TWIST RATE	1:11.25 IN R		
SSFV	1.00		
SSFH	1.00		
SIGHT UNITS	MOA	MIL	
MV-TEMP TABLE			
MV-TEMP	0 F	0 FPS	
	0	0	
	0	0	
	0	0	
	0	0	
	0	0	
	0	0	

PROFILE		6.5 - DEFAULT	
SET AS		A	B C
BULLET DATA		Library	
BULLET DIAMETER		0.264 in.	
BULLET WEIGHT		140 gr	
BULLET LENGTH		1.402 in.	
BULLET COEFFICIENT		0.601 G1	
FIREARM DATA			
MUZZLE VELOCITY		2800 FPS	
ZERO RANGE		100 yds.	
SIGHT HEIGHT		1.75 in.	
ZERO HEIGHT		0.00	
ZERO OFFSET		0.00 in.	
TWIST RATE		1:11.25 IN R	
SSFV		1.00	
SSFH		1.00	
SIGHT UNITS		MOA	MIL
MV-TEMP TABLE			
MV-TEMP		0 F	0 FPS
		0	0
		0	0
		0	0
		0	0
		0	0
		0	0

PROFILE		.308 - DEFAULT	
SET AS		A	B C
BULLET DATA		Library	
BULLET DIAMETER		0.308 in.	
BULLET WEIGHT		175 gr	
BULLET LENGTH		1.240 in.	
BULLET COEFFICIENT		0.475 G1	
FIREARM DATA			
MUZZLE VELOCITY		2650 FPS	
ZERO RANGE		100 yds.	
SIGHT HEIGHT		1.75 in.	
ZERO HEIGHT		0.00	
ZERO OFFSET		0.00 in.	
TWIST RATE		1:8.00 IN R	
SSFV		1.00	
SSFH		1.00	
SIGHT UNITS		MOA	MIL
MV-TEMP TABLE			
MV-TEMP		0 F	0 FPS
		0	0
		0	0
		0	0
		0	0
		0	0
		0	0

COMPLIANCE

United States



This device complies with part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) This device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

Contains FCC ID: 2AA9B05

Note: This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

Canada

CAN ICES-3B/NMB-3B

Contains IC: 12208A-05

Australia and New Zealand



China



Class B ITE

この装置は、クラスB 情報技術装置です。この装置は、家庭環境で使用することを目的としていますが、この装置がラジオやテレビジョン受信機に近接して使用されると、受信障害を引き起こすことがあります。

取扱説明書に従って正しい取り扱いをして下さい。

VCCI-B

Translation:

This is a Class B product based on the standard of the VCCI Council. If this is used near a radio or television receiver in a domestic environment, it may cause radio interference. Install and use the equipment according to the instruction manual.



VIP WARRANTY

OUR UNCONDITIONAL PROMISE TO YOU.

We promise to repair or replace
the product. Absolutely free.

- ▶ **Unlimited.**
- ▶ **Unconditional.**
- ▶ **Lifetime Warranty.**

You do not have to register, save the box, or a
receipt for the Warranty to be honored.

Learn more at VortexOptics.com

service@VortexOptics.com • 1-800-4VORTEX

*Note: The VIP Warranty does not cover loss, theft,
deliberate damage, or cosmetic damage not affecting
product performance.*

For additional and latest manuals, visit
VortexOptics.com



M-00276-1

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Patent Pending