



CALDWELL®

VELOCIRADAR™

INSTRUCTIONS & SAFETY INFORMATION



Please visit www.caldwellshooting.com/warranty or contact Customer Service at 1-833-784-5520 for complete warranty terms and conditions.

For purchasing replacement parts, please contact Caldwell Customer Service
NOT WARRANTED AGAINST MISUSE, ABUSE, OR COMMERCIAL USE.

CONTENTS



Velociradar™ Chronograph



Ball Head
Tripod



Recoil Trigger



USB-C Charging Cable



SAFETY AND WARNINGS

Read thoroughly all directions and safety instructions included in the package. Failure to comply may result in an unsafe firearm condition that may cause property damage, personal injury or death.



WARNING: Target must have a safe backstop. Always follow all applicable safety rules while using the chronograph, including but not limited to:

1. Firearm and shooting safety rules
2. Airgun and paintball gun safety rules
3. Ammunition reloading safety rules
4. Archery safety rules

If you are not familiar with applicable rules for your application consult the manufacturer(s) of the firearm, airgun, paintball gun, bow or reloading equipment/component...



WARNING: Velocity measurements should not be used to calculate combustion pressures in your cartridge or chamber. Again, do not exceed published maximum powder levels in your ammunition.



WARNING: Do not try to protect your chronograph with armor plating. Bullet ricochet from hitting this plating could cause property damage, personal injury or death. Intentional or unintentional shooting of the chronograph will void factory warranty.

As with any electronic device, water can damage certain components. To prevent damage, do not use chronograph outside when it is raining without being protected.

SPECIFICATIONS

Velocity Range: 250-4500 FPS

Battery: Rechargeable Lithium-Ion, 7.4V, 2500mAh, 18.5Wh

Charging Input: USB-C 5V, 700mA

Operating Temperature: 0-130 degrees F

Smart Phone Interface: Bluetooth Low Energy (BLE)

Radar Transmission Frequency: 24075MHz to 24175MHz

Model #1134904

OVERVIEW



1. Directional Buttons – Press to navigate menus.
2. Power Button – Press to turn on and off Velociradar.
3. Select Button – Press to select options and enter menus.
4. Back Button – Press to undo and exit menus.
5. Arm Button – Press to disable/enable radar during a string.
6. USB-C Charging Port – For charging the internal lithium-ion battery.
7. Recoil Trigger Port – For connecting the included external recoil trigger.
8. Peep Sight – For aligning the radar to the target.
9. ¼"-20 Mount – For included ball head tripod or other mounting attachment.

CHARGING

Connect the included USB-C charging cable to the USB-C charging port of the Velociradar. Connect the other end of the charging cable to a 500mA or greater USB charging adapter or power bank. You will not be able to use the Velociradar while it is charging.

WARNING: The Velociradar contains a lithium-ion battery. To prevent the possibility of personal injury, product damage, or other property damage caused by battery exposure to extreme heat, store the device out of direct sunlight. To avoid over-heating, do NOT charge this device in high temperatures or humidity.

POWERING ON/OFF

Power On: (When Velociradar is off) Hold the Power Button for 1 second until the screen turns on.

Power Off: (When Velociradar is on) Press and release the Power Button.

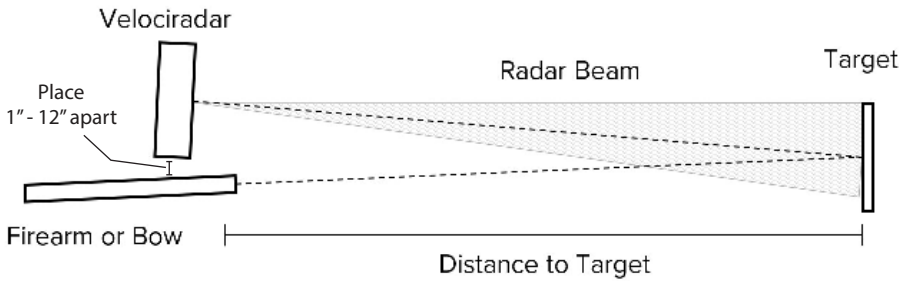
OPERATION

The Velociradar Chronograph captures advanced ballistic data safely from behind the firing line. It can be set up near the firearm using the included ball head tripod and aimed using the integral peep sight. The radar is activated using the internal acoustic trigger (using muzzle blast) or by using the external recoil trigger (included), securely attached to the firearm or bow.

To use the Velociradar, follow these steps:

1. Set up a shooting target 100 yards away. The target may be set up closer if necessary, but the Velociradar cannot track the bullet once it is past the target.
2. Set up your shooting position in a safe and comfortable location. Ensure that you have enough space to place the Velociradar on a tripod next to your firearm or bow.
3. Attach the Velociradar securely to the included ball head tripod. Turn on the Velociradar by pressing and holding the Power Button until the display turns on.
4. Choose the Acoustic Trigger or the Recoil Trigger to activate the radar. Select the trigger mode in the setting menu on the Velociradar or in the app.
5. If you are using the Recoil Trigger, attach it to your firearm or bow using the provided cable and strap. Follow the instructions in the Recoil Trigger section for more details.
6. Start a new string on the Velociradar by selecting New String from the main menu. You can also choose to continue an existing string if you want to add more shots to it.
7. Press any button to pause the radar. The display will show that the string is paused. To resume, press the Arm Button again.
8. Aim the Velociradar by centering the target inside the peep sight. Make sure the Velociradar is level and stable on the tripod.
9. Aim your firearm or bow at the same target as the Velociradar. Make sure the muzzle is even with or slightly in front of the Velociradar. Never shoot from behind the Velociradar to avoid accidental impact and damage.
10. Take the first shot. The Velociradar will detect the shot using the selected trigger and measure the velocity and other ballistic data of the projectile. The data will be displayed on the screen after a few seconds.
11. Repeat the steps above for each shot you want to record. The Velociradar will store up to 100 shots per string.
12. String data is saved after every shot. When you are finished with the string, press the back button to return to the main menu.

SETUP TIPS



The Velociradar measures the speed and distance of the projectile while it is in the radar beam.

For reliable measurement:

The Velociradar should be as close to the muzzle or release point without being in danger of impact or excessive muzzle blast.

Set up the target at a distance that is appropriate for the method of shooting and ensure that the projectile impacts the target reliably. Shots off target may not be reliably detected.

Make sure the range between the Velociradar and Target is clear of any obstructions such as other targets, brush, trees, etc. This can cause the radar to be blocked and prevent an accurate reading.

Ensure that both the Velociradar and firearm or bow are aimed precisely at the same target.

The Velociradar should be even with or slightly behind the muzzle for accurate distance measurement.

Use the appropriate trigger method for your environment.

The Velociradar should be set on a stable bench or tripod. Recoil or an unstable bench can cause the radar to become misaligned and miss the shot.

If a stable bench is not available, we recommend mounting the Velociradar to a freestanding tripod near the bench.

Examples:



VELOCIRADAR CLOSE TO THE BARREL.



VELOCIRADAR SLIGHTLY BEHIND MUZZLE.

USING THE PEEP SIGHT

The integrated Peep Sight allows for easy aiming of the Velociradar.

To use the Peep Sight:

1. Start with the Velociradar mounted to a tripod and in the position it will be used from.
2. First, find the sight picture by holding your eye a few inches away from the Peep Sight. Move your head around until you can see through the Peep Sight.
3. Now, holding the Velociradar, maintain the sight picture and adjust the Velociradar until the target can be seen in the center of the Peep Sight.



X No sight picture

X Poor sight picture

✓ Good sight picture

**✓ Target centered
in sight**

Note: The Peep Sight is calibrated to the exact angle of the radar beam for maximum signal strength and detection distance and may be slightly offset from the perpendicular to the main body housing. Always aim using the Peep Sight and not chronograph main body.

RECOIL OR ACOUSTIC ACTIVATION

The radar ballistic measurement is triggered by either the internal Acoustic Trigger or the external Recoil Trigger.

The Acoustic Trigger is activated by the sound of the muzzle blast. It is NOT recommended for suppressed firearms, air rifles, archery or at busy ranges with a lot of other shooters' muzzle blasts.

The Recoil Trigger is activated by the recoil of the firearm or bow when shooting and is not affected by the sound of near-by shooters. The Recoil Trigger can be strapped to the firearm or bow. It is recommended for suppressed, air rifles, and archery.

The Trigger mode can be changed in the Settings menu, accessed through the Main Menu.

RECOIL TRIGGER ATTACHMENT

The Recoil Trigger can be used with rifles, shotguns, handguns, bows, and crossbows. In most applications it is best to securely strap the trigger to a non-moving part of the firearm or bow such as the stock, scope, grip, or riser. In the case of smaller handguns, it may be best to hold the trigger between your palm and the grip.



RIFLE or SHOTGUN

Strap trigger securely to the stock, barrel, or scope as shown.

NOTE: Make sure the cable won't interfere or catch with the action or the firearm.



HANDGUN

Strap the trigger assembly to the grip, or hold the trigger firmly between the grip and your palm.

NOTE: Make sure the cable won't interfere with the slide, or be exposed to blast from a revolver cylinder.



ARCHERY

Strap the trigger to the bow riser, stabilizer, or crossbow stock.

NOTE: Make sure the trigger and cable are completely clear of the bowstring.

SMART PHONE CONNECTION

Download and install the Caldwell App for Android or iOS from the Apple App Store or Google Play Store. Follow the instructions within the app to connect to and interface with your Velociradar.



TROUBLESHOOTING

ISSUES: CAN'T CONNECT TO THE APP

Bluetooth and Location Access:

- Check that Bluetooth is enabled on your smartphone.
- Verify that Location Access is enabled on your smartphone.
- To confirm permissions, navigate to "Settings" in the Caldwell app and then go to the "Permissions" tab.

TROUBLESHOOTING

For additional troubleshooting information, please call Customer Service or visit caldwellshooting.com.

ISSUE: THE RADAR DIDN'T TRIGGER

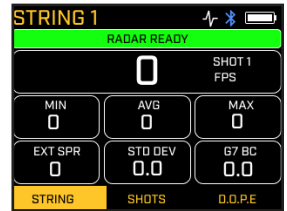
Trigger Method Selection:

- Check that the correct trigger method (recoil or acoustic) is selected in the settings menu of the Velociradar.
- If using the recoil trigger, ensure it is securely attached to the firearm or bow and that there is sufficient recoil to activate the trigger. For low-recoil applications, consider using the acoustic trigger. *See previous page for proper placement examples.*
- If using the acoustic trigger, ensure the firearm is as close to the Velociradar as possible, and the report is loud enough to activate the trigger. For suppressed firearms and archery, consider using the recoil trigger.



Radar Readiness:

- Verify that the radar is armed, and the “Radar Ready” prompt is displayed. This should happen automatically if the Auto-Ready setting is enabled. If not, press the ARM button to arm the radar.



ISSUE: THE RADAR TRIGGERED, BUT NO READING



Alignment Check:

Ensure the Velociradar is aligned correctly with the target. The target you are shooting should be centered within the peep sight of the Velociradar.



Positioning:

Confirm that the firearm or bow is positioned as close to the left or right of the Velociradar as possible.



Adjust Aim:

If both alignment and positioning are correct, adjust the aim of the Velociradar **slightly** toward the muzzle of the firearm.

FIRMWARE UPDATES

Firmware updates can be found in the Caldwell App and applied to your connected Velociradar. Follow the instructions in the app.

In order to perform a firmware update on the device or check for a firmware update you must navigate to the Devices tab > select your device > settings icon in the top right hand corner > click on "Check for update."

FCC STATEMENT

Changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

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

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.

IC STATEMENT

This device complies with Industry Canada's license-exempt RSSs. Operation is subject to the following two conditions:

(1) This device may not cause interference; and

(2) This device must accept any interference, including interference that may cause undesired operation of the device.

The term "IC: " before the certification/registration number only signifies that the Industry Canada technical specifications were met. This product meets the applicable Industry Canada technical specifications.

Cet appareil contient des émetteurs / récepteurs exemptés de licence conformes aux RSS (RSS) d'Innovation, Sciences et Développement économique Canada. L'exploitation est autorisée aux deux conditions suivantes : (1) l'appareil ne doit pas produire de brouillage, et (2) l'utilisateur de l'appareil doit accepter tout brouillage radioélectrique subi, même si le brouillage est susceptible d'en compromettre le fonctionnement.

IC SAR INFORMATION STATEMENT

Your Velociradar is a radio transmitter and receiver. It is designed and manufactured not to exceed the emission limits for exposure to radiofrequency (RF) energy set by the Innovation, Science and Economic Development Canada of the Canada Government. These limits are part of comprehensive guidelines and establish permitted levels of RF energy for the general population. The guidelines are based on standards that were developed by independent scientific organizations through periodic and thorough evaluation of scientific studies. The standards include a substantial safety margin designed to assure the safety of all persons, regardless of age and health. The exposure standard for Velociradar employs a unit of measurement known as the Specific Absorption Rate, or SAR. The SAR limit set by the ISED is 1.6 W/kg. * Tests for SAR are conducted with the Velociradar transmitting at its highest certified power level in all tested frequency bands. Although the SAR is determined at the highest certified power level, the actual SAR level of the Velociradar while operating can be well below the maximum value. This is because the Velociradar is designed to operate at multiple power levels so as to use only the power required to reach the network. In general, the closer you are to a wireless base station antenna, the lower the power output. Before a Velociradar is available for sale to the public, it must be tested and certified to the ISED that it does not exceed the limit established by the government adopted requirement for safe exposure. The tests are performed in positions and locations (e.g., at the ear and worn on the body) as required by the ISED for each model. The highest SAR value for this Velociradar when worn on the body, as described in this user guide, is 0.10 W/Kg (Body-worn measurements differ among Velociradar, depending upon available accessories and ISED requirements). The maximum scaled SAR in hotspot mode is 0.10 W/Kg. While there may be differences between the SAR levels of various Velociradar and at various positions, they all meet the government requirement for safe exposure. The ISED has granted an Equipment Authorization for this Velociradar with all reported SAR levels evaluated as in compliance with the ISED RF exposure guidelines. SAR information on this Velociradar is on file with the FCC and can be found under the Display Grant section of <https://sms-sgs.ic.gc.ca/> after searching on IC: 29812-1134904 Additional information on Specific Absorption Rates (SAR) can be found on the Cellular Telecommunications Industry Association (CTIA) web-site at <http://www.wow-com.com>. * In the United States and Canada, the SAR limit for Velociradar used by the public is 1.6 watts/kg (W/kg) averaged over one gram of tissue. The standard incorporates a substantial margin of safety to give additional protection for the public and to account for any variations in measurements.

BATTERIES

This product uses Lithium-Ion batteries. Misuse of batteries could cause a leak, rupture or other trouble. When throwing used batteries away, follow the disposal instructions indicated on the batteries and the local disposal laws. Do not heat or disassemble batteries. Do not put in fire or water. Batteries could rupture or leak, causing fire, injury or stains around them.

ENVIRONMENTALLY SAFE BATTERY DISPOSAL



**This product contains the following
toxic and corrosive material:
LITHIUM-ION**



WARNING:

Toxic materials must be disposed of in a specified manner in order to prevent contamination of the environment. Before disposing of damaged or worn out Lithium-ion battery packs, contact your local waste disposal agency or the local Environmental Protection Agency for information and specific instructions. Take the batteries to a local recycling and/or disposal center that is certified for disposal. If the battery pack cracks or breaks, whether it leaks or not, do not recharge it and do not use it. Dispose of it and replace it with a new battery pack.

DO NOT ATTEMPT TO REPAIR.

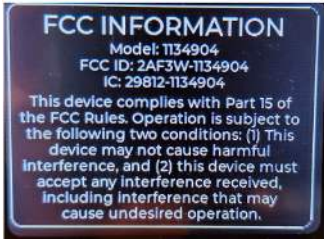
Follow these instructions in order to avoid injury and the risk of fire, explosion, or electric shock and to avoid damage to the environment:

- **DO NOT** attempt to remove or destroy any of the components of the battery pack.
- **DO NOT** attempt to open the battery pack.
- **DO NOT** get the solution in the eyes or the skin, and do not swallow it.
- **DO NOT** place batteries in regular household trash.
- **DO NOT** incinerate batteries.
- **DO NOT** place batteries where they will become part of any waste landfill or municipal solid waste team.
- Cover the batteries terminals with heavy-duty adhesive tape.
- Dispose of batteries at a certified recycling or disposal center.
- If a leak develops, the electrolytes that are released are corrosive and toxic.

DÉCLARATION D'INFORMATION SUR LE SAR D' IC

Votre vélociradar est un émetteur et récepteur radio. Il est conçu et fabriqué pour ne pas dépasser les limites d'émissions d'exposition à l'énergie des radiofréquences (RF) établies par Innovation, sciences et développement économique Canada du gouvernement du Canada. Ces limites font partie de lignes directrices exhaustives et établissent les niveaux autorisés d'énergie RF pour la population générale. Les lignes directrices sont fondées sur des normes élaborées par des organismes scientifiques indépendants à la suite d'une évaluation périodique et approfondie d'études scientifiques. Les normes comprennent une marge de sécurité importante conçue pour assurer la sécurité de toutes les personnes, quels que soient leur âge et leur état de santé. La norme d'exposition pour Velociradar utilise une unité de mesure connue sous le nom de débit d'absorption spécifique, ou das. La limite de das fixée par l'ISED est de 1,6 W/kg. * Les Tests de das sont effectués avec le Velociradar émettant à son niveau de puissance certifié le plus élevé dans toutes les bandes de fréquence testées. Bien que le das soit déterminé au niveau de puissance certifié le plus élevé, le niveau SAR réel du Velociradar en fonctionnement peut être bien inférieur à la valeur maximale. En effet, le Velociradar est conçu pour fonctionner à plusieurs niveaux de puissance de manière à n'utiliser que la puissance nécessaire pour atteindre le réseau. En général, plus vous êtes proche d'une antenne de station de base sans fil, plus la puissance de sortie est faible. Avant qu'un Velociradar soit disponible à la vente au public, il doit être testé et certifié à l'ISED qu'il ne dépasse pas la limite établie par l'exigence adoptée par le gouvernement pour une exposition sûre. Les tests sont effectués dans des positions et des emplacements (par exemple, au niveau de l'oreille et portés sur le corps) comme l'exige l'ISED pour chaque modèle. La valeur de das la plus élevée pour ce vélociradar lorsqu'il est porté sur le corps, comme décrit dans ce guide de l'utilisateur, est de 0,10 W/Kg (les mesures portées sur le corps diffèrent selon les accessoires disponibles et les exigences de l'ISED). Bien qu'il puisse y avoir des différences entre les niveaux de das de divers Velociradar et à divers postes, ils répondent tous aux exigences du gouvernement pour une exposition sécuritaire. L'ISED a accordé une autorisation d'équipement pour ce vélociradar avec tous les niveaux de das signalés évalués comme étant conformes aux lignes directrices de l'ISED sur l'exposition aux RF. Des renseignements sur le das de ce Velociradar se trouvent dans les dossiers de la FCC et peuvent être trouvés dans la section subvention d'affichage de <https://sms-sgs.ic.gc.ca/> après avoir fait une recherche sur le IC: 29812-1134904 des renseignements supplémentaires sur les taux d'absorption spécifiques (das) peuvent être trouvés sur le site web de la Cellular Telecommunications Industry Association (CTIA) à <http://www.wow-com.com>. * aux États-Unis et au Canada, le das limite pour vélociradar utilisé par le public est de 1,6 watts/kg (W/kg) en moyenne sur un gramme de tissu. La norme comporte une marge de sécurité importante pour assurer une protection supplémentaire au public et pour tenir compte des variations éventuelles des mesures. La distance d'essai SAR est 0mm.

Turn on and enter the home screen
Steps for viewing E-Label:



Step1: Select to SETTINGS

Step2: Select to FCC INFO



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Product: 1134904 | Instructions: 1184286 | VER. 001