# BLINC

INTEGRATED CONTROL BOARD

## OWNER'S MANUAL

WOLVERINE AIRSOFT

www.wolverineairsoft.com

# Wolverine Airsoft App

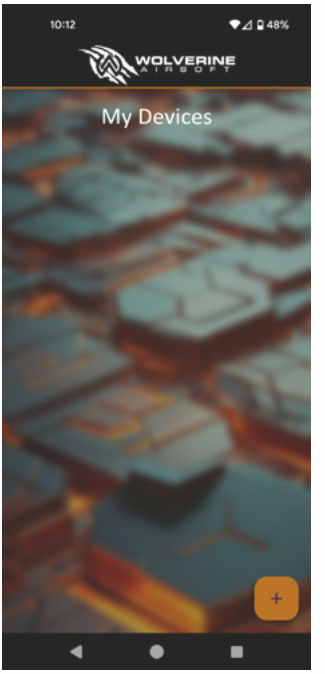
The Wolverine Airsoft App unlocks the advanced Bluetooth connectivity features of the BLINC including remote settings including Fire Modes, Rate of Fire, and Dwell, as well as chronograph features when used with a compatible Acetech Bluetooth tracer. The Wolverine Airsoft App is available for iOS and Android from the Apple App Store and Google Play Stores.

www.wolverineairsoft.com/app

IOS | Android

**The App is not required!**
Many settings are accessible without the app through Live Fire Tuning Mode **[See Page 21].**

# Pairing

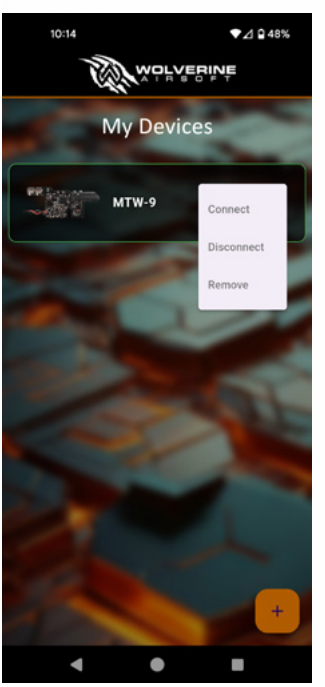



With the BLINC installed, connect the battery or turn on your Battery Grip. The BLINC will beep one time and enter Bluetooth Discovery Mode for one minute. You can restart Discover Mode by pressing and holding the bolt catch for two seconds.

On the app, tap [+] in the app to add a new device, then tap the magnifying glass icon to search for the BLINC. Once found, tap "ADD" to begin pairing. The BLINC should begin beeping to indicate it is in pairing mode. Rotate the selector switch to complete pairing. The BLINC should stop beeping and appear in the device list.

If you have a compatible Acetech Bluetooth tracer or chronograph, pair it by powering it on, tapping [+], and following the instructions.

# Connecting




Your device should appear with a green border when it is connected. If the border is white, your device is not connected.

Tap [...] on the device list to connect, disconnect, or remove your device.

**NOTE: To maximize your gun's battery life, close the app or disconnect your device when not using app features.**

## Troubleshooting

If the BLINC failed to pair or connect:

- Ensure the BLINC is powered on and in Discovery Mode by disconnecting the battery and reconnecting it. You should hear one beep and the gun should be able to operate. It will remain in Discovery Mode for one minute. You can restart Discover Mode by pressing and holding the bolt catch for two seconds.

- Ensure the BLINC is not currently connected to another phone/app. If so, disconnect and/or remove the device on the other phone/app then try again.

- Ensure the selector switch is properly prepared as instructed on **Page 4** and confirming the gun switches between Semi and Full Auto.

- Ensure the gun is not in Live Fire Tuning Mode See **Page 21**]. If so, disconnect the battery and reconnect it.

- If pairing a board that is not installed in a gun, use your finger to cover the optical sensor [See **Page 3**] to simulate changing the selector switch.

- If none of these steps work, it may be necessary to factory reset the BLINC [See **Page 23**].

## Voltage Alerts

The BLINC will beep four times if the voltage is too low. Please charge your battery. The BLINC will beep five times if a short is detected. Please remove the battery and find the source of the short.

# MTW Device Screen

Select your device to enter the MTW Home Screen. This provides access to all the BLINC's features and settings.

**EMD Mode**
Toggles between Traditional Mode [On] or Simplified Mode [Off] [See **Page 10**].

**Menu**
Opens additional pages and features including, Chronograph, Auto Tune, and advanced settings.

**Chronograph**
Displays energy or velocity when Chronograph or Random Sampling is enabled. Tap the units icon to toggle between feet, meters and joules.

**Profile Slot**
The current profile slot [1-5]. Each slot contains unique ROF, fire mode, and dwell settings. To switch slots, hold the trigger for 5 seconds in SEMI.

**Selector State**
Indicates the selector switch position corresponding to the settings below.

**Battery Indicator**
Displays battery voltage. The BLINC will power off if the voltage indicator drops to 6.0V.

**Rate of Fire**
How many shots can be fired per second in the current selector state and fire mode setting [See **Page 11**].

**Dwell**
The time [in microseconds] that the solenoid stays open for each shot [See **Page 12**].

**Mode**
Current Fire Mode. Options include Semi, 2-10 Round Burst, Binary, DMR and Full Auto [See **Page 10**].

**Save Profile**
This will save the current settings to a Profile [See **Page 13**].

**Apply**
Applies changes made to ROF, Fire Mode, or Dwell. The BLINC will beep one time to confirm the settings have been updated.

# Empty Mag Detection Modes

The BLINC will automatically disable firing after the last BB is fired when using a compatible Wolverine Airsoft MTW-Spec Magazine. Firing will resume in one of two ways depending on the following settings:

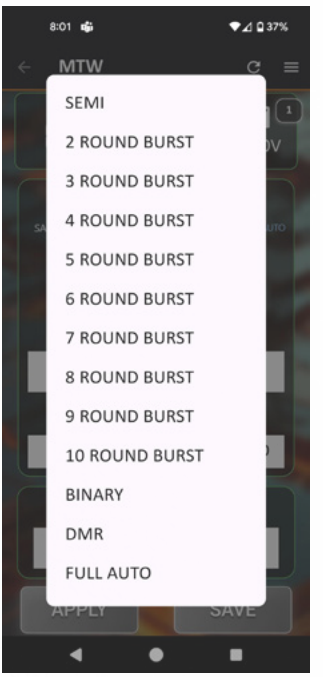
- Traditional [Default]: To reset firing, the user must  press the bolt catch after loading a new magazine.

- Simplified: The gun will automatically reset when the magazine is removed. Recommended for AEG magazines that do not have empty mag detection.

## Manual Settings

You can also change between Traditional and Simplified modes by placing the selector in SEMI and holding down the trigger and the bolt catch for 5 seconds. The gun will fire, so do this in a safe position or with an unloaded gun. The BLINC will beep one time for Traditional Mode and two times for Simplified Mode.

# Fire Modes




The Fire Mode can be set for each Selector State by tapping the corresponding MODE field on the MTW Device Screen.

- Semi fires the gun a single time when the trigger is pressed.
- Multi-Round Burst Modes will fire the gun 2 to 10 times per trigger pull. Note that longer bursts can be ended early by releasing the trigger.
- Binary Mode fires the gun when the trigger is pressed or released, allowing fast single round firing.
- DMR Mode acts like Single-Round Burst with a 2-second delay.
- Full Auto fires the gun as long as the trigger is held.

Once set as desired, tap APPLY. The BLINC will beep one time to confirm the settings have been updated.

# Rate of Fire

The Rate of Fire (ROF) can be set for each Selector State by tapping the corresponding ROF field on the MTW Device Screen.

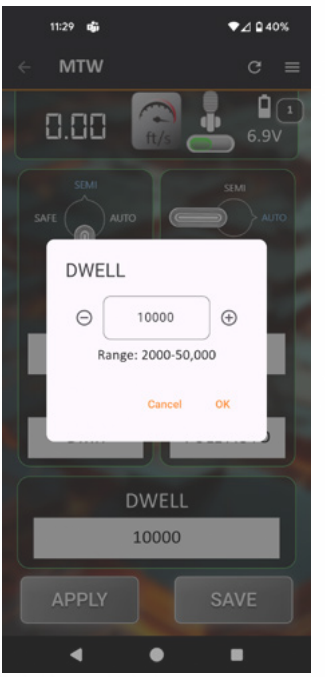
ROF sets the interval of time between shots in Full Auto or Burst Modes. (Ex. 15 = 1/15th second = 15 shots per second)

Once set as desired, tap APPLY. The BLINC will beep one time to confirm the settings have been updated.

**Warning!**

Setting a high Rate of Fire may result in misfeeding depending on other factors including the magazine, hop, and dwell setting.

# Dwell




The dwell controls how long the engine's solenoid valve remains open when firing.

For consistent performance, dwell should be high enough to continue releasing air until the BB has exited the barrel. For air efficiency, dwell should be no longer than necessary.

A value [in microseconds] can be entered directly.

Default values:

- MTW / Article: 10,000 [10ms]
- MTW Shotgun: 40,000 [40ms]

Once set as desired, tap APPLY. The BLINC will beep one time to confirm the settings have been updated.

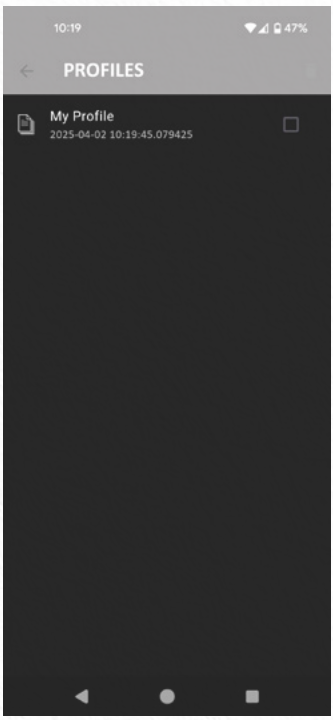
## Tuning the Dwell

Finding the ideal dwell value that is perfect for your setup is called "Tuning the Dwell". This involves firing the gun at different dwell settings and looking for a drop in velocity.

If you have a compatible Acetech Bluetooth chronograph or tracer with chronograph , this process can be automated with the Auto Tune feature [See **Page 16**].

Dwell tuning is also accessible manually through Live Fire Tuning Mode. [See **Page 21**].

# Profiles




The Profiles feature allows you to save ROF, Fire Mode, and Dwell settings and easily recall them later.

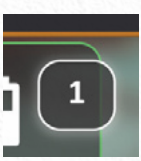
On the MTW Device Screen, tap SAVE and you will be prompted to enter a unique name for the profile.

Tap [≡] and navigate to Profiles. Tap a profile to load the settings into the current profile slot [see below].

Tap APPLY. The BLINC will beep one time to confirm the settings have been updated.

To delete a profile, select it by tapping the checkbox to the right and then tap 🗑.

## Profile Slots

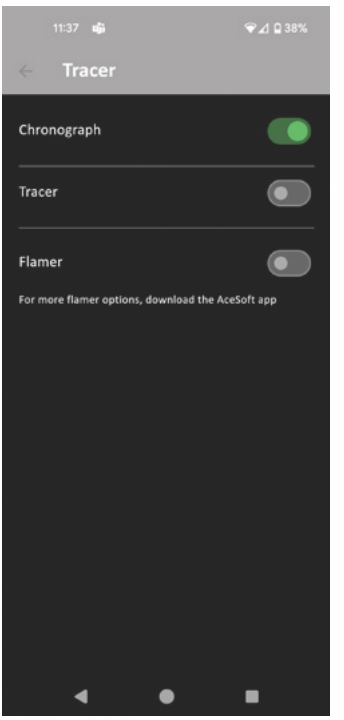



Loading a profile will only replace the settings in the current profile slot.

The BLINC stores 5 unique profiles [indicated by the number in the top right. Each slots contains unique ROF, Fire Mode, and Dwell settings. The current slot can be cycled by holding the trigger for 5 seconds in SEMI. The BLINC will beep 1 to 5 times to indicate the current slot.

# Tracer

When paired with a compatible Acetech Bluetooth tracer, some features can be toggled on or off by tapping [≡] and navigating to Tracer.




### Chronograph

Toggles the chronograph function. Note that you will need to enter the BB weight on the Settings page to get correct values [See **Page 18**].

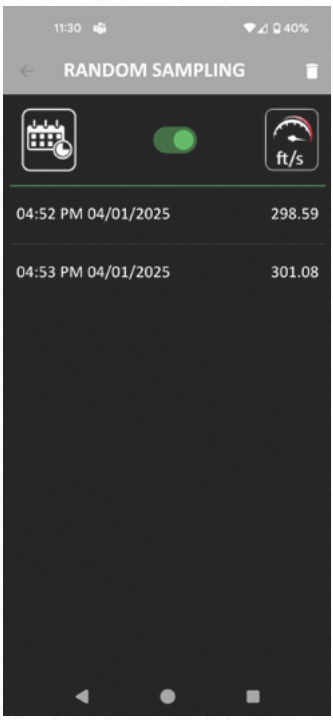
### Tracer / Flamer

Toggles the tracer/flamer functions on/off. Cannot be used at the same time as the chronograph.

## More Options

More tracer options are available by downloading the Acesoft app.

# Random Sampling



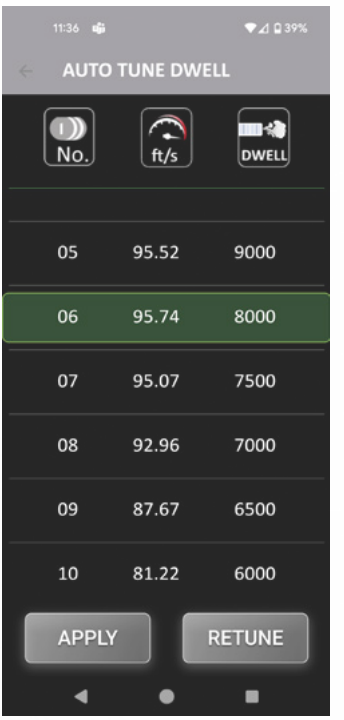

The Random Sampling feature will automatically chrono random shots [approx 1 in 30] and log them for reference later.

When paired with a compatible Acetech Bluetooth chronograph or tracer with chronograph, tap [≡] and navigate to Random Sampling.

Note: If the Tracer or Flamer function if enabled, Random Sampling will momentarily disable them for the random sampled shot.

To clear the data, tap 🗑.

# Auto Tune




Auto Tune will use the chronograph feature to find the optimum dwell setting for your setup. This should be performed in a safe environment with a loaded magazine and attached air source.

When paired with a compatible Acetech Bluetooth chronograph or tracer with chronograph, tap [≡] and navigate to Auto Tune.

Hold down the trigger. The gun will fire one shot per second while gradually decreasing the dwell.

You can stop the test by releasing the trigger when a drop in velocity is noticed.

The optimum dwell setting will automatically be highlighted in green. You can select a different value if desired or tap RETUNE to begin again.

Tap APPLY button to choose the recommended dwell value. The BLINC will beep one time to confirm the settings have been updated.

## Shotgun Dwell

The HAVOC requires a higher dwell value than is available in Auto Tune Mode [See **Page 12**].

# Tournament Lock

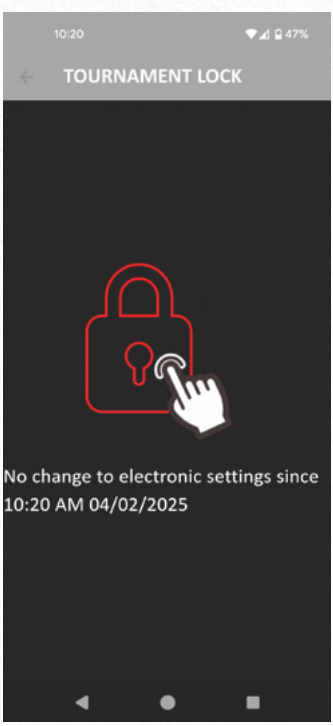
The Tournament Lock feature displays a timestamped lock screen that is cleared if any settings are changed.

Tap [≡] and navigate to Tournament Lock. Press the green lock icon to activate the lock.

Once locked, the time and date of the lock are displayed. You can navigate away from this screen to access other features.

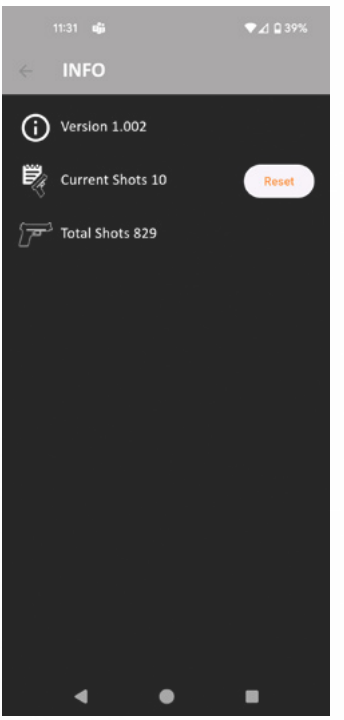
The lock will be cleared if changes are made to any of the following:

- Fire mode
- Rate of Fire
- Fire Mode
- Dwell



# Shot Count

Tap [≡] and navigate to Info to see the current app version and two shot counters.




## Current Shots

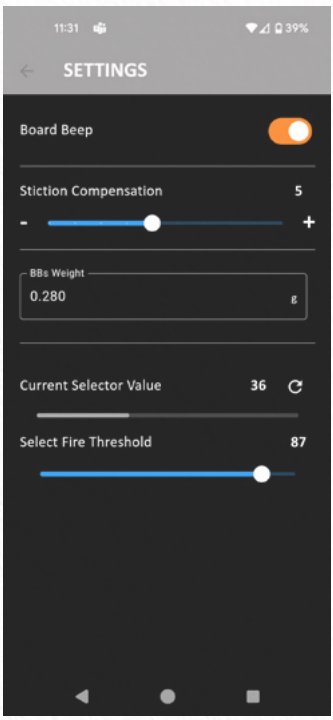
This counter can be used as desired and reset to 0 at any time.

## Total Shots

This counter stores the lifetime shots of your BLINC. It cannot be reset, even by performing a factory reset.

# Settings

Tap [≡] and navigate to Settings.




### Board Beep

Toggles the beep function on/off.

### Stiction Compensation

The BLINC will add additional dwell to the first shot after long periods of inactivity to compensate for O-ring stiction. The amount of compensation can be adjusted if the first shot is noticeably underpowered or overpowered. [Default: 5]

### BB Weight

Used by the chronograph features to accurately calculate Joules. This setting has no effect on performance.

### Current Selector Value

Reads the BLINC's current optical sensor value. This can be used to test if the selector switch was correctly prepared [See **Page 4**] by changing the gun's selector position and tapping ↻. The AUTO value should be significantly higher than the SEMI value. The SAFE value is ignored.

### Select Fire Threshold:

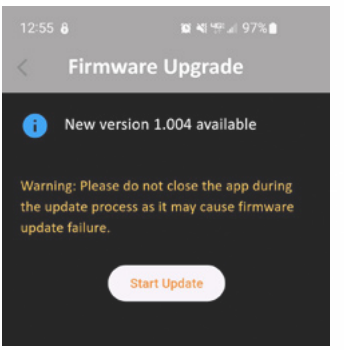
This value should be set between the AUTO and SEMI values to ensure the selector switch position is read correctly. [Default: 87]

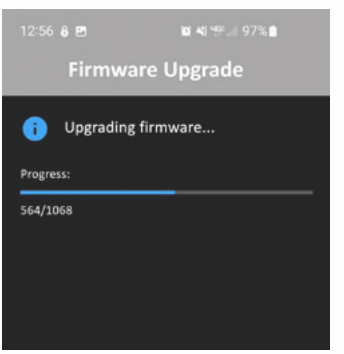
# Firmware Upgrade

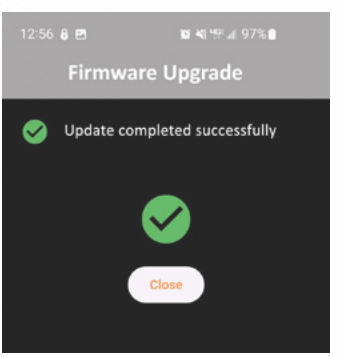
Tap [≡] and navigate to Upgrade to check your BLINC for the latest firmware version.

If an update is available, tap START UPDATE. A progress bar will be displayed and the BLINC will beep one time to indicate the update is complete.

Warning: Please do not close the app during the update process as it may cause firmware update failure.



# Live Fire Tuning

You can adjust the Rate of Fire and Dwell without the Wolverine Airsoft app using Live Fire Tuning Mode. This mode will fire the gun, so ensure the gun is not loaded and/or in a safe environment.

## Enabling Live Fire Tuning

To enter Live Fire Tuning Mode, connect the battery while holding the trigger. The BLINC will beep two times. In this mode, the gun will fire when the trigger is released.

To exit Live Fire Tuning Mode, disconnect the battery or wait 30 seconds for the BLINC to beep one time and return to normal firing mode.

## Rate of Fire

In Live Fire Tuning Mode, switch the selector to the AUTO position.

Hold the trigger to cycle up through several preset ROF settings. Tap the trigger to test the current setting. Double-tap the trigger to cycle down to the previous setting.

Note: ROF is applied to ALL Fire Modes and both Selector States. To set them individually, use the app [See **Page 11**].

Presets

| Setting | ROF |
|---|---|
| 1 | 12 |
| 2 | 15 |
| 3 | 17 |
| 4 | 21 |
| 5 | 24 |
| 6 | 27 |
| 7 | 30 |
| 8 | 33 |
| 9 | 36 |
| 10 | 39 |

## Dwell

In Live Fire Tuning Mode, switch the selector to the SEMI position.

Hold the trigger and the BLINC will cycle down through preset dwell settings. Tap the trigger to test the current setting. Double-tap to cycle up to the previous setting.

To determine the optimal dwell value, set the dwell in a safe environment with a loaded gun with air connected. A chronograph is also recommended. Cycle down through dwell values and watch for the first shot with a noticeable drop in velocity. Double-tap the trigger to return to the previous higher setting. This should be the optimal dwell.

Note: Dwell is applied to ALL Fire Modes. To set them individually, use the app (See **Page 11**).

Presets

| Setting | Dwell (Microseconds) |
|---|---|
| 1 | 25 |
| 2 | 18.5 |
| 3 | 14 |
| 4 | 12 |
| 5 | 10 |
| 6 | 9.5 |
| 7 | 9 |
| 8 | 8.5 |
| 9 | 8 |
| 10 | 7.5 |
| 11 | 7 |
| 12 | 6.5 |
| 13 | 6 |
| 14 | 5.5 |
| 15 | 5 |
| 16 | 4.5 |

### Shotgun Dwell

The HAVOC requires a higher dwell value than is available in Live Fire Tuning Mode (See **Page 12**).

# Default Settings

Profile Slot 1
Semi: ROF: 21 / Mode: SEMI
Auto: ROF: 21 / Mode: FULL AUTO
Dwell: 10000

Profile Slot 2
Semi: ROF: 21 / Mode: SEMI
Auto: ROF: 21 / Mode: 3-Round Burst
Dwell: 10000

Profile Slot 3
Semi: ROF: 21 / Mode: SEMI
Auto: ROF: 21 / Mode: 2-Round Burst
Dwell: 10000

Profile Slot 4
Semi: ROF: 21 / Mode: SEMI
Auto: ROF: 21 / Mode: SEMI
Dwell: 10000

Profile Slot 5
Semi: ROF: 21 / Mode: 2-Round Burst
Auto: ROF: 21 / Mode: FULL AUTO
Dwell: 10000

EMD: On
Beep: On
Stiction Compensation: 5
BBs Weight: 0.20
Select Fire Threshold: 70

# Certifications and Compliance

RF exposure statement
This equipment complies with the FCC and ISED radiation exposure limits set forth for an uncontrolled environment. This transmitter must not be co-located or operating in conjunction with any other antenna or transmitter.

Cet équipement est conforme aux limites d'exposition aux rayonnements de la FCC et de l'ISED établies pour un environnement non contrôlé. Cet émetteur ne doit pas être co-localisé ou fonctionner en conjonction avec une autre antenne ou un autre émetteur.

FCC Warning
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.

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.

NOTE 2: Any changes or modifications to this unit not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

IC WARNING
This device contains licence-exempt transmitter(s) that comply with Innovation, Science and Economic Development Canada's licence-exempt RSS(s). Operation is subject to the following two conditions:
(1) This device may not cause interference.
(2) This device must accept any interference, including interference that may cause undesired operation of the device.

L'émetteur/récepteur exempt de licence contenu dans le présent appareil est conforme aux CNR d'Innovation, Sciences et Développement économique Canada applicables aux appareils radio exempts de licence. L'exploitation est autorisée aux deux conditions suivantes:
1. L'appareil ne doit pas produire de brouillage;
2. L'appareil doit accepter tout brouillage radioélectrique subi, même si le brouillage est susceptible d'en compromettre le fonctionnement.

Caution:
Use the Product in the environment with the temperature Between -10° and 40°; Otherwise, it may damage your product. Products can only be used below 2000m altitude

For the following equipment:
Product Name: BLINC AK
Brand Name: Wolverine Airsoft
Model No.: MTW-E-420
Wolverine Airsoft, LLC

hereby declares that this [Name: BLINC AK, Model: MTW-E-420] is in compliance with the essential requirements and other relevant provisions of Directive 2014/53/EU.

CE

The full text of the EU declaration of conformity is available at the internet address: www.wolverineairsoft.com/compliance

This product is intended for sale and application in a business environment.
RED Article 10 2
-This product can be used across EU member states
RED Article 10 10

-The product is class 1 product, No restrictions

The RF distance between body and product is 0mm
Frequency Range: 2402MHz-2480MHz
Max.RF Output Power: 1Mbps: 1.61dBm; 2Mbps: 1.60 dBm (EIRP)

UK:
This product complies with the relevant requirements of the Radio Equipment Regulations 2017.
It is intended for use in the United Kingdom.

UKCA marking has been applied to demonstrate compliance.

Product: BLINC AK MTW-E-420
Operating frequency: 2402–2480 MHz
Max RF Output Power: 1Mbps: 1.61dBm; 2Mbps: 1.60dBm (EIRP)

The full text of the UK Declaration of Conformity is available at:
www.wolverineairsoft.com/compliance

Product: BLINC AK FCC ID: 2BRCZ-MTW420
Model: MTW-E-420 IC: 34383-MTWE420

R XXX-XXXXXX

## Need professional help?

To find a retailer close to you visit:
www.wolverineairsoft.com/dealers

www.wolverineairsoft.com