



Eagle Eye  
User Manual  
September, 2009

CONGRATULATIONS on the purchase of your new Predator Games Infra-red system (IR-Tag). The Eagle Eye Paintball IR-Tag system consists of a special barrel which replaces a conventional paintball marker barrel, a barrel adapter designed to fit the Eagle Eye barrel to the threads of most major paintball markers, and a special Wi-Fi electronic hopper which mounts on any standard paintball marker. This system will automatically network with other Eagle Eye systems that are operating within a range of up to one mile. Game status and player performance is shown on the LCD display.

## Safety

### **⚠ WARNING**

This Eagle Eye system is designed to convert a paintball marker into a state-of-the-art IR-Tag gun. However, IR-Tag game participants must never play in an area where paintball markers are being shot, as serious injury could result from being struck by a paintball, unless you are wearing special protective equipment designed specifically for paintball play.

### **⚠ CAUTION**

The developers at Predator Games have taken great care designing a product that can be used safely. First and foremost, we have removed the projectile risk associated with paintball. We then have developed our product around IR LED technology. Our IR LED (light emitting diode) Barrel transmits invisible infrared light, just like the remote controls used in most televisions and toys. These LEDs are basically small light bulbs that instead of shining visible light, emit invisible infrared light. Our units are designed to operate at safe levels and do not constitute any form of health hazard. However, as with any light source, we recommend that the user take precautions to avoid unnecessary exposure by never looking down the barrel at close range or aiming the barrel at someone's eyes while firing the system.

### **⚠ CAUTION**

Always pay close attention when the game organizer conducts a pre-game safety briefing about the use of your equipment and special hazards you should watch out for.

### **⚠ CAUTION**

Never in any way modify your Predator Games Eagle Eye system.

### **⚠ CAUTION**

Choose the paintball marker you wish to convert to an IR-Tag system and familiarize yourself with its product manual. Remember that the host paintball marker must be in good working condition with a properly filled tank of CO<sub>2</sub> or high pressure propellant gas. Understand the safety procedures set forth in the original manufacturer's paintball marker manual. Have your marker checked by a certified airsmith if you have any doubts or problems before you assemble the Eagle Eye components onto any marker, or play in your first game of IR-Tag.



# USER MANUAL

Eagle Eye  
September 2009

# TIPPMANN®

## Liability Statement

This product is surrendered by Predator Games, LLC and Tippmann Sports, LLC with the understanding that the purchaser and or user assumes all liability resulting from unsafe handling or any action that constitutes a violation of any applicable laws or regulations. Neither Predator Games, LLC nor Tippmann Sports, LLC shall be liable for personal injury, loss of property or life resulting from the use of this product under any circumstances. All information contained in this manual is subject to change without notice. Predator Games, LLC and Tippmann Sports, LLC reserve the right to make changes and improvements to products and manuals without incurring any obligation to incorporate such improvements in products previously sold.

## Warranty

Predator Games, LLC warrants that this product is found free from defects in materials and workmanship for a period of one year from the original date of purchase by the initial owner/purchaser. This warranty does not apply to defects discovered after purchase which were caused by the unauthorized modifications, alterations or misuse of our product. Predator Games, LLC will repair or replace, without charge, any of its products that have failed through defect in material or workmanship.

EXCEPT AS EXPRESSLY STATED HERIN, THERE ARE NO WARRANTIES, EXPRESS OR IMPLIED, BY OPERATION OF LAW OR OTHERWISE, OF THE PRODUCTS OR SERVICES FURNISHED BY EITHER PREDATOR GAMES, LLC OR TIPPMANN SPORTS, LLC. BOTH PREDATOR GAMES, LLC AND TIPPMANN SPORTS, LLC SPECIFICALLY DISCLAIM AND EXCLUDE ANY IMPLIED WARRANTY OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE OR ARISING FROM A COURSE OF DEALING OR USAGE OF TRADE. THERE ARE NO WARRANTIES WHICH EXTEND BEYOND THE DESCRIPTION ON THE FACE HEREOF. NEITHER PREDATOR GAMES, LLC NOR TIPPMANN SPORTS, LLC SHALL BE LIABLE FOR, NOR DOES EITHER PREDATOR GAMES, LLC OR TIPPMANN SPORTS, LLC AUTHORIZE ANY PERSON TO ASSUME FOR PREDATOR GAMES, LLC OR TIPPMANN SPORTS, LLC, ANY LIABILITY IN CONNECTION WITH THE PRODUCTS OR SERVICES FURNISHED BY PREDATOR GAMES, LLC OR TIPPMANN SPORTS, LLC, INCLUDING, WITHOUT LIMITING THE GENERALITY OF THE FOREGOING, LIABILITY FOR LOSS OF PRODUCTION, PRODUCT, EQUIPMENT OR PROFITS OR LIABILITY FOR DIRECT, INCIDENTAL, SPECIAL OR CONSEQUENTIAL DAMAGES OR ANY DAMAGES TO PERSONS OR PROPERTY. PURCHASER AGREES THAT PURCHASER'S SOLE REMEDY FOR LIABILITY OF ANY KIND, INCLUDING NEGLIGENCE WITH RESPECT TO THE PRODUCTS AND SERVICES FURNISHED BY PREDATOR GAMES, LLC OR TIPPMANN SPORTS, LLC SHALL BE LIMITED TO THE REMEDIES PROVIDED IN THIS LIMITED WARRANTY.

## Contact

### Sales

Tippmann Sports  
2955 Adams Center Road  
Fort Wayne, IN 46803  
Phone: 800-533-4831  
e-mail: [sales@tippmann.com](mailto:sales@tippmann.com)

### Customer Service

Predator Games  
640 N. Prospect Drive  
Whitewater, WI 53190  
Phone: 888-950-1221  
e-mail: [service@predatorgames.com](mailto:service@predatorgames.com)

## Quick Start Game

We have determined that the easiest way to learn how to use your new Predator Games system is to actually play a simple game. Once you have done this, you will find the system to be very intuitive and easy to use. This example uses two of the Eagle Eye system installed on two Tippmann 98 Custom paintball markers.

### Step 1: Install the system

- Before playing, be sure the marker is not loaded by following the marker's owner manual procedures.
- Install the Predator Games red electronic hopper into the hopper hole of each of the Tippmann 98 Custom markers as if you were installing a normal paintball hopper. Make sure that the unit is fully tightened in place to prevent turning of the unit.
- Remove your existing Tippmann 98 Custom paintball barrel.
- Screw in the Predator Games infrared barrels into each of your markers.
- Plug the infrared barrel cable firmly into the red electronic hopper. If the barrel cable is not properly plugged in, it may dislodge during game play due to the vibration of your marker.
- The Eagle Eye system requires the use of an air supply. Please follow your marker's owner manual for information on how to install the air supply onto your marker.

### Step 2: Power on unit

- Load four 1.5 volt AA alkaline or rechargeable batteries into the battery compartment of each of your Eagle Eye systems.
- Press down for one second on the *POWER* button on the top side of the Predator Games red electronic hopper.
- The Predator Games logo and website address should appear informing you that your unit is fully powered up and operational.

### Step 3: Create a game

- If necessary, use the *UP* and *DOWN* buttons until you highlight the *GAME* menu item.
- Press the *SELECT* button.
- Press the *SELECT* button on the *CREATE GAME* menu item.
- Press the *SELECT* button on the *GAME1* menu item.
- You should now see a screen showing you the total amount of time, ammunition, and health for the game you have selected. Press the *SELECT* button to continue.
- Your system will attempt to acquire an open network slot and then should show a screen that says *PLAYERS JOINED: 1*.
- You have now created a game and are considered the host system. Your system is waiting for another player to join. Set this unit aside and go onto the next step.

### Step 4: Join a game

- Power up the other unit by repeating Step 1.
- Press the *SELECT* button on the *GAME* menu item.
- Press the *SELECT* button on the *JOIN GAME* menu item.
- Your system will now look for all available games to join. This may take a few seconds.
- Your system should show one game that was created by the host unit in Step 3. Go ahead and click the *SELECT* button on this newly created game. Your system will now wait for instruction from the host system.
- Go back to your first unit. The screen should now show *PLAYERS JOINED: 2*.
- Since both players are now shown in your game, you can press the *SELECT* button to continue.



## USER MANUAL

Eagle Eye  
September 2009

# TIPPMANN®

- You will now get one final verification screen. Press the *SELECT* button to continue.
- Your host will automatically download the game to both of your systems and start the countdown to the start of the game.

### Step 5: Play the game

- Once the game has finished the countdown you can begin playing.
- Simply point and shoot your Tippmann 98 Custom marker at the other player's Predator Games electronic hopper to score a hit.
- The game will end when either the time runs out or one player has reached 0 health. You may also end the game at any time by pressing on the *MENU* button and following the prompts. A summary screen of your performance will be displayed.

You have now played your first game! The next sections will go into the details of each menu screen. These screens will give you more options for a greater playing experience. The basics of game play however are still the same as the five step game you played above. We suggest that you refer back to the Quick Start Game as needed.

## Button Guide

The following control buttons can be found on top of the Predator Games electronic hopper:

- *Power button*: This button will turn your unit on and off. When turning on the unit you must press and hold the button for 1 second or until the Predator Games logo appears. When turning off the unit you must press and hold the button until the screen goes blank.
- *+ and - buttons*: These buttons will adjust the brightness level of your display.
- *MENU (M) button*: This button will move you to your previously selected screen.
- *SELECT (S) button*: This button will select the menu item you have highlighted.
- *UP and DOWN*: These buttons will move your cursor up and down the menu items.
- *BACKLIGHT button*: This button will turn your display light on and off to allow you to play in low light.

## Menu Guide

The following menu items can be found throughout the gaming system. We will explain each of these below in detail. The main menu is the first screen that appears once the unit is fully powered up.

### Main Menu: Game

Upon selecting the *GAME* menu item you will receive the following options:

- *CREATE GAME*: This option will bring you through the process of creating a game that other people can join and play. By doing this you are now considered a Host player. The Predator Games system allows for up to 10 games of 100 players (1,000 total) to be played simultaneously.
- *JOIN GAME*: This option will bring up a list of available games that you may join. You may only join games that have not already been started. Each Predator Games system has a maximum WiFi range of one mile in which to find and join a game.

## Game Menu: Create Game

Upon selecting the *CREATE GAME* menu item you will be presented with the following *Game* choices. Select one of the predefined games to start playing right away or select *CUSTOM* to create your own game. *CUSTOM* games will present you several screens in which you can use the *UP*, *DOWN*, *SELECT*, and *MENU* buttons to define game parameters.

	Time	Ammunition	Health
Game 1	5 minutes	50	2
Game 2	10 minutes	100	1
Game 3	10 minutes	250	2
Game 4	15 minutes	350	3
Game 5	15 minutes	350	1
Kids	5 minutes	Unlimited	Unlimited
Free	Unlimited	Unlimited	Unlimited
Custom	User Defined	User Defined	User Defined

## Game Menu: Join Game

Take into consideration the following guidelines when *Joining a Game*.

- It can take several seconds for your system to find all available games that you can join and play.
- You will only see a list of games that have not already started playing.
- The name of the game you see in the list will be that of the host player's system. As we will explain later in this guide, you may give each system your own unique name.
- As stated in the Quick Start Game, once you have selected a game to join, your system will now wait for the host player to start the game. The host player must wait until they feel all players have joined before they will begin the game.
- Once the host player starts the game, the host system will download the game parameters to each individual player's system. This takes approximately 1 second per player. For example a 20 player game will take on average 20 seconds to download to all systems.
- Once the game parameters have been downloaded to each player's system the game will automatically start.
- There is a maximum of 10 games and 100 players per game for a total of 1,000 players that can be using the Predator Games system at any given playing location within a maximum one mile radius.

## Main Menu: Setup

The *SETUP* menu will give you control of the following parameters:

- *SYSTEM NAME*: The name of your unit will default to a unique Guest identification. You may choose to keep this as your name or you may change it to any 12 character combination. Keep in mind that you may have the same name as another. You can change your name simply by pressing the *SELECT* button on the highlighted system name and then by using the *UP* and *DOWN* buttons to choose the individual letter or number. Pressing select will allow you to fill all 12 characters (even blank) and will bring you back to the *SETUP* menu.
- *SERIAL NUMBER*: The serial number is the unique identification of your Predator Games system. It is set at the factory and can not be changed. This serial number is used in the product registration of your unit at [www.PredatorGames.net](http://www.PredatorGames.net).
- *WEAPON TYPE*: Pressing *SELECT* on the *WEAPON TYPE* will allow you to switch between *RIFLE* mode and *MEDIC* mode. By default your system is in *RIFLE* mode. The mode must be selected before a game is started and can not be changed during game play. Simply defined, the *RIFLE* mode will cause hits to another player while the *MEDIC* mode will heal a player. You may not heal a dead player, only one that has been wounded (health decreased). You may not add more health than what the game parameters have defined at the start of the game.
- *GUN SOUND*: When turned on, the *GUN SOUND* will cause a short simulated gun noise when your trigger is pulled. By default the *GUN SOUND* is off for the Predator Games Eagle Eye system as this uses the popping sound of compressed air when shooting. The *GUN SOUND* is used exclusively for the Predator Games Barracuda system which has no air source.
- *GENERATION*: By default your system is set to *GENERATION 2*. Generation 2 allows you the full features of our gaming system. You may change this option to *GENERATION 1* which allows for backwards compatibility of your unit to our original gaming system. *GENERATION 1* will limit the function of your system by only providing a simple gaming timer and audible notification of hits. Scoring, games, and WiFi communication between systems is turned off.
- *WIFI MODE*: By default your system is set to *OUTDOOR MODE*. The *OUTDOOR MODE* has a range with a maximum distance of one mile. Battery life can be expected to decline by 10% when using the *OUTDOOR MODE*. *INDOOR MODE* has a limit on the WiFi range of approximately 500 feet and is designed to increase battery life.
- *CHANNEL*: By default every radio transmitter on all Predator Games systems are set to channel 0C. We highly suggest you keep them on this channel. In some extreme cases you may notice outside interference of your systems. Changing the channel is the easiest way to alleviate this problem. Keep in mind that if you change the channel on your system, you must change it on all systems that you plan on using in your game.
- *SHOCK SENSE*: The Shock Sense is only used on the Eagle Eye system which uses a vibration sensor to determine when to fire the gun. By default each system is set to 800. The lower the number, the more sensitive the vibration sensor will be. Newer paintball markers tend to vibrate less and thus it may be required that you lower this number in order to operate your system.

## Main Menu: Sync

This *SYNC* section of the main menu system is used with the Predator Games server. This manual is not intended to cover this feature. Full details of this feature are explained in the Central Command Module (CCM) user manual.

## Game Play

The following will help you understand how your system is functioning during game play.

- When your system is hit by another player:
  - A hit is scored against you when any other player manages to shoot and hit one of the three sensors located in your red electronic hopper.
  - You will be put in an *INVINCIBILITY* mode for 1 second while your gun displays which player hit you.
  - Your system will flash and beep for 3 seconds
- When you are terminated by another player:
  - When your health reaches zero you are considered terminated.
  - Your system will have a constant light on and beep for 5 seconds
  - Your system will inform you that you have been terminated and to return to base
  - Once you are dead, your system will no longer send out an IR beam at an opponent.
  - Remember once you are terminated you may press the MENU button to see a summary screen of your performance.
- When you hit or terminate another player:
  - Your system will flash and beep one time giving you a visual notification that you have hit another player.
  - Your screen will identify which player you have hit or terminated.

## Game Screen



The Game Screen displays the following information during game :

- **K:** The K value equates to the number of players that you have terminated. This is different from the number of players that you have hit which will only be displayed in the summary screen at the end of the game. A Kill is awarded to the player that takes the last health point away from an opposing player. For example in a three health game, you may hit an opposing player twice, but the Kill will only go to the player who hit them the third time.
- **R:** This stands for the mode your system is in. R stands for Rifle mode and M stands for Medic mode as described in the section above.
- **A:** This equals the number of remaining ammunition that your system has for the game you are currently playing. Once your ammunition level reaches 0 you will no longer be able to shoot an IR beam at an opponent.
- **H:** This represents your remaining health that you have in the game you are currently playing.
- **TIME:** The remaining time for your current game will be displayed in the middle of your screen.



## Performance Specifications

- *Infrared Range:* Each standard barrel will be able to shoot a minimum of 150 feet outdoors and 500 feet indoors. Direct sunlight can negatively affect system performance.
- *RF Range:* The WiFi radio in your system has a maximum range of one mile. Players must be within this range in order to remain in the game.
- *User Limit:* The Predator Games system allows up to 1,000 simultaneous players
- *Game Limit:* The Predator Games system is capable of handling up to 10 simultaneous games with up to 100 players in each game.
- *Battery life tests:*
  - With a brand new set of batteries (alkaline or rechargeable) you can expect to get between 25,000 to 30,000 shots per system.
  - Remember to turn your unit off when you are done playing to conserve battery life.
  - Setting your WiFi to Indoor mode will help conserve your battery life
  - When your system batteries are low you may notice your screen will blink or start getting dim. Typically you can play for one to two more hours after these initial symptoms appear.

## Product Repair Procedure

- Contact Predator Games via email at [Service@PredatorGames.com](mailto:Service@PredatorGames.com) or by phone at 888-950-1221 Extension 1 for a Return Authorization Number.
- Once you have received your Return Authorization Number you may ship or deliver your product(s) to: Predator Games, LLC. 640 N. Prospect Drive Whitewater, WI 53190.
- Postage or delivery charges must be prepaid.
- Include a brief statement regarding the requested repair, your name, return address, email address, and telephone number where you can be reached during normal business hours, if possible.