



# **BT-4<sup>TM</sup>** **MARKER SERIES** **OPERATOR** **MANUAL**

**BATTLE TESTED**

**COMBAT**  
**ASSAULT**  
**S.W.A.T.**  
**BANSHEE**  
**IRONHORSE**

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**BT-4<sup>TM</sup>**

# \* READ OWNERS MANUAL BEFORE USING.\*

## Rules of Safe Marker Handling

1. Treat every marker as if it were loaded.
2. Never look down the barrel of a paintball marker.
3. Keep your finger off the trigger until ready to shoot.
4. Never point the marker at anything you don't wish to shoot.
5. Keep the marker on "safe" until ready to shoot.
6. Keep the barrel blocking device in/ on the marker's muzzle when not shooting.
7. Always remove paintballs and propellant source before disassembly.
8. After removing propellant source, point marker in safe direction and discharge until marker is degassed.
9. Store the marker unloaded and degassed in a secure place.
10. Follow warnings listed on propellant source for handling and storage.
11. Do not shoot at fragile objects such as windows.
12. Every person within range must wear eye, face and ear protection designed specifically to stop paintballs and meeting ASTM standard F1776.
13. Always measure your marker's velocity before playing paintball and never shoot at velocities in excess of 91.44 meters (300 feet-per-second).

## BT Paintball Designs, Inc. Model BT-4™

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Congratulations on your selection of the BT-4™ paintball marker. The BT-4™ is made to provide you with many years of reliable performance. BT Paintball Designs, Inc. is honored that you have chosen the BT-4™ as your marker of choice and hope you enjoy using this high quality product.

## BT-4™ Specifications

Model.....	BT-4
Caliber.....	.68
Action.....	Semi-Automatic
Powered.....	CO2 or Compressed Air (HP Output)
Cycle Rate.....	13BPS
Main Body Material.....	Aluminum
Accuracy Range.....	150+ft

The BT-4™ comes with a removable barrel system. This feature allows the user to select a barrel that is most suitable for the playing conditions. Standard barrels are mirror-honed with a step-bore, porting and a stock length of 8 inches.



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## **BT PAINTBALL DESIGNS, INC. LIMITED WARRANTY**

BT PAINTBALL DESIGNS, INC. warrants the replacement of any original part due to defect in material and/or workmanship of this marker. This warranty will be in effect for twelve (12) months for parts and twelve (12) months for labor following the original date of purchase for the original purchaser. Such warranty service will be provided only if the warranty registration card included with this manual is filled in completely and on file at BT PAINTBALL DESIGNS, INC. All other service will be duly charged for and returned via UPS C.O.D.

BT PAINTBALL DESIGNS, INC. will replace without charge any original part that is determined by BT PAINTBALL DESIGNS, INC. to be defective under the terms of this warranty. However, shipping charges are not covered hereunder. Failure due to an accident, abuse, neglect, modification, normal wear, operator error, maintenance by other than an authorized BT PAINTBALL DESIGNS, INC. dealer, or use of parts inconsistent with the use originally intended for the marker as sold, is not covered by this warranty.

There are no other warranties or guarantees, expressed or implied, made by BT PAINTBALL DESIGNS, INC. on this marker. The sole and exclusive liability of BT PAINTBALL DESIGNS, INC. and/or its authorized dealers, affiliates, or agents pursuant to this warranty will be for repair or replacement of the defective part; incidental or consequential damages are expressly excluded hereunder.

BT PAINTBALL DESIGNS, INC., its authorized dealers, affiliates, or agents, will not be liable under this warranty, nor under any state or federal law, or the common law or otherwise for any damage or failure, including personal injury, resulting from such use and/or alteration. This warranty gives you specific legal rights, and you may also have other rights that may vary from state to state.

**For warranty parts, service or information contact:**

**BT PAINTBALL DESIGNS, INC.  
3217 EAST WASHINGTON BLVD.  
FORT WAYNE, INDIANA 46803  
260-424-9100  
info@btpaintball.com**

# **BATTLE TESTED**

# BT PAINTBALL DESIGNS

**NOTE: Eye protective devices designed specifically for paintball use must be worn by the operator and anyone within range.**

Read this entire manual before loading, attaching a propellant source or in any way attempting to operate the BT-4™.

## Barrel Installation

1. Make sure marker is degassed, hopper removed, no paintballs in the feed port or breech and the safety is set to "safe".
2. While pointing marker in a safe direction, place the threaded end of the barrel into the front opening of the marker body.
3. Turn the barrel clockwise until it stops (do not over tighten).
4. Adjust the barrel accessories if necessary.
5. Install a barrel blocking device. This can be a barrel plug or other such device that prevents the accidental discharge of a paintball.



## Air Cylinder Installation

1. Make sure the barrel blocking device is properly installed and the marker safety is set to "safe" (red marking on safety will NOT be visible).
2. While pointing the marker in a safe direction, cock the marker by pulling the cocking knob located on the left side of the marker back until it clicks and stops.
3. Release the cocking knob.
4. The marker is now cocked.
5. Locate the air cylinder adapter. The BT-4™ cylinder adapter is located at the base of the pistol grip.
6. Position the BT-4™ so that the air cylinder adapter is pointed upwards while keeping the muzzle of the marker pointed in a safe direction.
7. Insert the threaded cylinder valve end into the adapter.
8. Without pushing the cylinder, twist the cylinder clockwise and allow the threads to draw the cylinder into the marker until it stops. Your marker is now charged.



## Velocity Adjustment

1. Always check the velocity of the marker prior to playing paintball. Different playing fields may have different maximum velocity limits. At no time should you shoot at velocities above 300 feet-per-second.
2. Put on an eye protective device designed specifically for paintball and make sure that anyone within range of the BT-4™ does the same.
3. While pointing the marker in a safe direction, remove the barrel blocking device.
4. Point the BT-4™ over a chronograph that will measure the velocity of the paintballs discharged by the marker.
5. Set the trigger safety to "fire" (red mark will show).
6. Pull the trigger and check the reading on the chronograph.
7. Locate the velocity adjuster screw on the center of BT-4™, under the name plate.
8. Using a 5/32" hex key, turn the screw inward or clockwise to reduce the velocity, and outward or counterclockwise to increase the velocity of the paintballs discharged from the marker.

## Loader Installation

1. To install loader check the Slide-Away™ Elbow and loader to make sure they are free from debris and obstructions.
2. Position Slide-Away™ Elbow
3. Using a 3/16" hex wrench, loosen the clamping screw on the Slide Away™ Elbow to allow the loader to slide into the top of the elbow.
4. Press the loader into the opening of the Slide-Away™ Elbow until it stops.
5. Align the loader so that the lid is pointing to the rear and the loader is parallel with the marker.
6. Using a 3/16" hex wrench, tighten the clamping screw on the Slide-Away Elbow™ until snug. DO NOT over-tighten.

## Loading Paintballs

1. Put on an eye protective device designed specifically for paintball and make sure that anyone within range of the marker does the same.
2. Load quality .68 caliber paintballs (leave some room for paintballs to move about, inside loader).

**DO NOT REMOVE THE VELOCITY ADJUSTMENT SCREW.**



# BT PAINTBALL DESIGNS

## Proper Storage of the Marker

When you are finished using the BT-4™ it is important that you prepare the marker for storage. This will not only serve to increase the life of the marker, but will assure optimum performance on your next outing.

## Unloading

1. Put on an eye protective device designed specifically for paintball and make sure that anyone within range of the BT-4™ does the same.
2. Make sure the barrel blocking device is properly installed and the marker safety is set to "safe".
3. Loosen the loader clamping screw.
4. While holding the paintball hopper in place, invert the marker so that the hopper is below the BT-4™.
5. Remove the hopper and all paintballs.
6. While pointing the BT-4™ in a safe direction, remove the barrel blocking device and set the safety to "fire".
7. Keep the BT-4™ pointed in a safe direction and pull the trigger several times to insure there are no balls remaining in the chamber or the barrel.
8. Properly re-install the barrel blocking device and set the safety on "safe".

## Removing The Air Supply

1. Make sure the barrel blocking device is properly installed and the BT-4™ safety is set to "safe".
2. Point the BT-4™ in a safe direction and turn the cylinder counter clockwise about 3/4 of a turn. This allows the cylinder valve to close without damaging the cylinder O-ring.
3. While pointing the BT-4™ in a safe direction, disengage the safety (set to "fire").
4. Keeping the BT-4™ pointed in a safe direction, pull the trigger until the remaining CO2 or air is expelled and it fails to re-cock.
5. Unscrew the cylinder from the BT-4™.
6. The marker is now ready to be cleaned or put away for future use.

## Cleaning the marker

Once the BT-4™ is unloaded and the air cylinder is removed, you can use a damp cloth to wipe off paint, oil, dirt and debris. You can also use warm water to rinse the marker clean. Once your marker is clean and dry you can re-oil using a light, premium marker oil. (Note: Petroleum based and aerosol products can damage your markers o-rings. **DO NOT USE ANY PETROLEUM BASED OR AEROSOL PRODUCTS ON YOUR MARKER.**) To access the rear bolt and linkage arm you must remove the left receiver half. (See marker disassembly section.)

**Always store the marker in a secure location when not in use so as to prevent access by unauthorized persons.**

## Disassembly and Field Stripping

**!/\ WARNING:** Any assembly/ disassembly of any paintball marker should be performed by a qualified service technician.

For S.W.A.T. or Banshee magazine expansion chamber removal instructions, please see page 8 prior to disassembly.

**(MARKER MUST BE UNLOADED, DEGASSED AND UNCOCKED BEFORE ANY DISASSEMBLY. FOLLOW UNLOADING AND REMOVING AIR SUPPLY STEPS.)**

## Removing The Barrel

Turn the barrel counter clockwise to remove from the marker.

## Vertical Front Foregrip Removal/Relocation

The vertical foregrip may be removed or may be relocated along the lower picatinny rail as needed. To remove or adjust location:

**Note:** If relocating, make sure marker is pointed in a safe direction, barrel blocking device is installed and safety is set to "safe".

1. Turn vertical foregrip retainer counter clockwise to allow retention pin to drop. A coin may be used to assist in turning the vertical foregrip retainer.
2. Slide foregrip to preferred location or remove if so desired.
3. Reverse process to replace foregrip.



Note that the retention pin must line up in a gap on the picatinny rail.

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## Rear Notch Sight Removal/Relocation

The rear notch sight may be removed or may be relocated along the upper picatinny rail as needed. To remove or adjust location:

**Note:** If relocating, make sure marker is pointed in a safe direction, barrel blocking device is installed and safety is set to safe.

1. Using a 1/8" hex wrench loosen the rear sight retaining screw.
2. Slide rear sight to preferred location or remove if so desired.
3. Reverse process to replace rear sight.

## Slide-Away™ Elbow Removal/Relocation

The Slide-Away™ Elbow may be removed or may be relocated along the upper picatinny rail as needed (such as when required to insert a pull through squeegee). To remove or adjust location:

**Note:** If relocating, make sure marker is pointed in a safe direction, barrel blocking device is installed and safety is set to safe.

1. Press and hold the retention button located on the name plate side of the Slide-Away™ Elbow.
2. Move the Slide-Away™ Elbow to preferred location or remove if desired.
3. Reverse process to replace Slide-Away™ Elbow.

**Note:** Spring loaded retention button must line up in a gap on the picatinny rail.

## Trigger Frame Removal

1. Remove the two grip retention screws from the pistol grip.

**Note:** If the acorn shoulder nuts located in the pistol grip do not fall out after the screws are removed, then press them out with a small hex wrench or screwdriver.

## Accessing Internal Components

1. Remove the Cocking Handle Cover (rubber bonnet).
2. Lay on a flat surface with the name plate facing up.
3. Remove the four upper receiver retention screws.
4. Lift name plate receiver half away from other receiver half.

**Note:** The retention screw located below the cocking handle slot is longer than the rest.



## End Cap

**CAUTION:** May be under spring tension.

1. Carefully remove rear plug, spring guide, bumper o-ring and spring.

## Hammer, Cocking Handle and Connecting Rod Removal

1. Rotate Hammer counter-clockwise.
2. Remove Connecting Rod.
3. Remove Cocking Handle.
4. Slide Hammer rearward and remove.

## Barrel Adapter, Ball Retainer and Bolt Removal

1. Lift away Barrel Adapter (and barrel if still installed).
2. Lift out Ball Retainer.
3. Slide Bolt forward and remove.





### The S.W.A.T.

Includes:

- Magazine Expansion Chamber (01)
- Collapsible "CAR" Stock (06)

### The Banshee

Includes:

- BT-47 Barrel (02)
- Magazine Expansion Chamber (01)
- Combat Stock (05)

### The Ironhorse

Includes:

- BT-M16 Apex Barrel (03)
- Bi-Pod (04)
- Collapsible "CAR" Stock (06)



# BT PAINTBALL DESIGNS BATTLE TESTED

#### (01) Magazine Expansion Chamber

Not only does this add the look and feel of an M-16/M-4 magazine, it serves as an expansion chamber. This improves the efficiency of your air source and allows CO2 room to expand into a gas instead of pushing liquid CO2 into the BT-4. The same expansion chamber characteristics often permit playing in lower temperature conditions. With the Magazine Expansion Chamber, looks are certainly more than skin deep.

#### (02) BT-47 Barrel

AK-47 looks and feel make this one impressive looking, paint slinging machine. The AK-47 style barrel includes a raised sight rail, faux gas line and hand grips. Don't be surprised if your opponents surrender out of fear alone.

**Note:** *If the barrel comes loose and needs to be re-indexed, (sights or handgrips get out of alignment), you need to loosen the set screws located at the base of the front sight and at the base of the ring holding the hand grips in place. Twist the hand grip and sights as one unit until properly aligned and tighten the set screws.*

#### (03) BT-M16 Apex Barrel

M-16/M4 looks with Apex performance. This barrel allows you to dial-in the back spin from zero to maximum and then adjust the angle of attack from hard left to hard right to drop shot to maximum flat trajectory. Simply move the ramp switch forward to increase back spin and then twist the Apex end to set the angle of attack. The BT-M16 Apex Barrel looks great while providing, what some may consider, an unfair advantage.

**Note:** *If the barrel comes loose and needs to be re-indexed, (sights or handgrips get out of alignment), you need to loosen the set screws located at the base of the front sight and at the base of the ring holding the hand grips in place. Twist the hand grip and sights as one unit until properly aligned and tighten the set screws.*

#### (04) Bi-Pod

This collapsible Bi-Pod can be adjusted for uneven ground and folded up when not in use. The Bi-Pod makes for a stable shooting position preferred by snipers, the World over. The perfect addition to the Ironhorse, when every shot counts.

#### (05) Combat Stock

The Combat Stock gives you that great shoulder/stock support for optimal stability and balances out the BT-47 Apex Barrel.

#### (06) Collapsible "CAR" Stock

Collapse the stock for a short carbine style setup or extend it for a stable firing platform. By squeezing the locking tab located below the stock and pulling or pushing the butt plate, you can adjust the length of the collapsible stock to achieve the perfect setup for your playing style.



## S.W.A.T.



## BANSHEE



## IRONHORSE



### (01) Magazine Expansion Chamber Removal

Using a 1/8" hex allen wrench, loosen and remove the two screws in the Air Source Adapter (ASA) to separate it from the trigger frame. Remove the screw in the upper right corner of the magazine expansion chamber using a 5/32" hex allen wrench. Remove this screw's nut stem by pushing through the hole with the 5/32" allen wrench. Grab the magazine expansion chamber by hand and pull straight down and out of its mounting collar. Remove the two slotted thumb screws at the top of the mounting collar and remove the dovetail plate. Then slide the mounting collar forward to separate it from the receiver.

### (04) Bi-Pod Removal

Loosen the large thumbscrew on the underside of the bipod to separate it from the barrel.

### (05 & 06) Combat Stock and Collapsible "CAR" Stock Removal

These stocks take the place of the rear receiver. When servicing the marker internally, make sure the spring guide and bumper o-ring are in place when reassembling, or else damage to the receiver may result.

## Reassembly

To reassemble the marker, reverse the Disassembly instructions starting with the barrel adapter, ball retainer and bolt removal. While reassembling the marker, you should oil all O-rings and sliding parts. All parts and o-rings returned to the marker should be free of debris and visual nicks and scratches which can alter the performance of the marker. All screws returned to the marker must be tightened so there is no chance of them vibrating loose.

## Storage and Transportation

1. BT-4™ must be clear of all paint and propellant when not being used.
2. Be sure to have marker in "SAFE MODE" when not in use.
3. Make sure barrel blocking device is in place.
4. Store BT-4™ and propellant in cool dry place.
5. Keep your BT-4™ away from children without proper supervision.
6. Your BT-4™ must be free of all paint and not attached to a propellant source while being transported to and from the playing field.
7. Observe and obey all local, state and federal laws concerning the transportation of paintball markers. For information concerning any of the laws in your area, contact your local law enforcement.

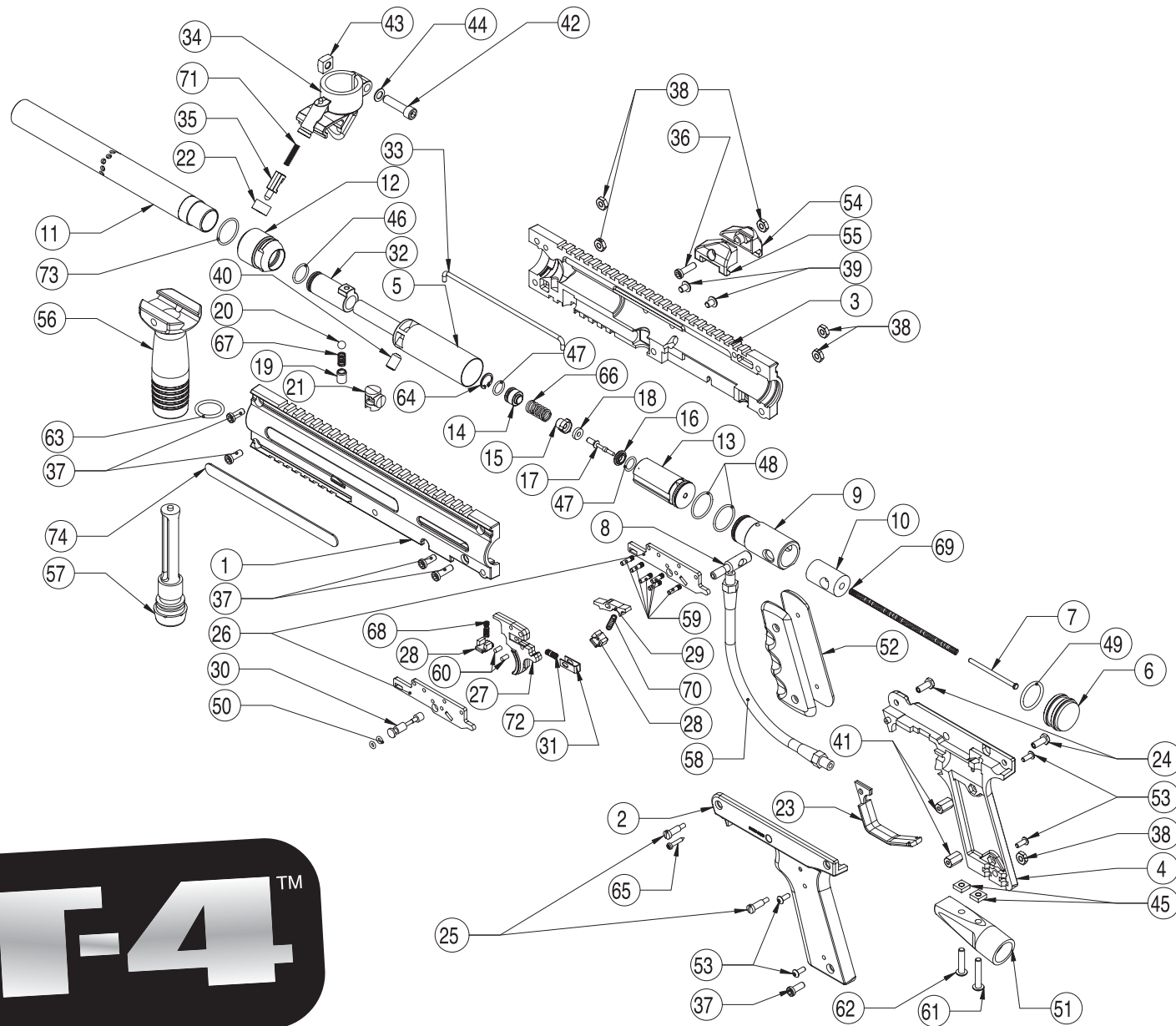
# BT-4™ MARKER SERIES

## Parts List

ITEM NO.	QTY.	DESCRIPTION	PART NO.	ITEM NO.	QTY.	DESCRIPTION	PART NO.
1	1	Left Upper Receiver	BT4-1	38	6	Receiver Nuts	BT4-38
2	1	Left Lower Receiver	BT4-2	39	2	Valve Screw	BT4-39
3	1	Right Upper Receiver	BT4-3	40	1	Velocity Screw	BT4-40
4	1	Right Lower Receiver	BT4-4	41	2	Grip Nut	BT4-41
5	1	Power Tube	BT4-5	42	1	Feed Elbow Pinch Bolt	BT4-42
6	1	Endcap	BT4-6	43	1	Feed Elbow Nut	BT4-43
7	1	Drive Spring Guide	BT4-7	44	1	Feed Elbow washer	BT4-44
8	1	Bolt Handle	BT4-8	45	2	Tank Adapter Nuts	BT4-45
9	1	Rear Bolt	BT4-9	46	1	Front Bolt O-Ring	BT4-46
10	1	Bolt Plug	BT4-10	47	2	Internal Valve O-Ring	BT4-47
11	1	Barrel	BT4-11	48	2	Rear Bolt & Valve O-Ring	BT4-48
12	1	Barrel Adapter	BT4-12	49	1	Shock Absorber O-Ring	BT4-49
13	1	Valve Body	BT4-13	50	2	Safety O-Ring	BT4-50
14	1	Internal Valve Seat	BT4-14	51	1	Tank Adapter	BT4-51
15	1	Plunger Cup	BT4-15	52	1	45 Rubber Grip	BT4-52
16	1	Rear Valve Seat	BT4-16	53	4	Grip Screws	BT4-53
17	1	Valve Stem	BT4-17	54	1	Right Rear Sight	BT4-54
18	1	Cup Seal	BT4-18	55	1	Left Rear Sight	BT4-55
19	1	Ball Latch Housing	BT4-19	56	1	Front Grip	BT4-56
20	1	Ball Latch Bearing	BT4-20	57	1	Front Grip Bolt	BT4-57
21	1	Expansion Chamber Plug	BT4-21	58	1	Gas Line	BT4-58
22	1	Feed Elbow Latch Cap	BT4-22	59	6	Trigger Plate Dowel Pins	BT4-59
23	1	Trigger Guard	BT4-23	60	2	Trigger Dowel Pins	BT4-60
24	2	Lower Receiver Nut	BT4-24	61	1	Long Tank Adapter Bolt	BT4-61
25	2	Lower Receiver Screw	BT4-25	62	1	Short Tank Adapter Bolt	BT4-62
26	2	Trigger Plate	BT4-26	63	1	Front Grip O-Ring	BT4-63
27	1	Trigger	BT4-27	64	1	Valve Snap Ring	BT4-64
28	2	Trigger Plate Spacer	BT4-28	65	1	Trigger Guard Screw	BT4-65
29	1	Sear	BT4-29	66	1	Internal Valve Screw	BT4-66
30	1	Safety	BT4-30	67	1	Ball Detente Spring	BT4-67
31	1	Trigger Slider	BT4-31	68	1	Trigger Return Spring	BT4-68
32	1	Front Bolt	BT4-32	69	1	Drive Spring	BT4-69
33	1	Linkage Arm	BT4-33	70	1	Sear Spring	BT4-70
34	1	Feed Elbow	BT4-34	71	1	Feed Elbow Latch Spring	BT4-71
35	1	Feed Elbow Latch	BT4-35	72	1	Trigger Slider Spring	BT4-72
36	2	Long Receiver Bolt	BT4-36	73	1	Barrel Adapter O-Ring	BT4-73
37	4	Short Receiver Bolt	BT4-37	74	1	Name Plate Sticker	BT4-74



**BT-4™ MARKER SERIES**  
Parts List Diagram



**BT-4™**

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## **WARNING!**

This is not a toy. Misuse may cause serious injury or death. Eye protection designed specifically for paintball must be worn by the user and persons within range. Recommend 18 years of age or older to purchase. Persons under 18 years of age must have adult supervision.

**READ THIS MANUAL BEFORE USING.**



**BT PAINTBALL DESIGNS, INC.**

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