

Operation and Maintenance of the Ultra II Model Bumper Boy Retriever Trainer



Bumper Boy Inc.
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Introduction

Whether you're a hunter, field trailer, running hunt tests, using spaniels, pointers or retrievers, the Bumper Boy Ultra II series will provide you with reward-based training methods never before possible. This reward-based system will have the largest impact on your dog's ability to remember, retrieve, hunt, build desire and learn. This unique training system will provide your dog with a more enjoyable training experience, and help him learn faster. Whether you are teaching "sit to flush" or complicated multiple marks, you and your dog can look forward to increased enjoyment and more effective use of time.

This sporting dog system is designed to simulate visual, and aural dynamics of a human training assistant, and the rapidly changing environment of a hunting experience. This method produces better marking dogs than any conventional training methods through use of reward-based techniques stressed by many world-renowned animal trainers such as Karen Pyior, PHD, an animal behavior expert with the University of San Diego.

This manual applies to operation of all Bumper Boy Ultra II series models.

Introduce Your Dog to Bumper Boy

Like any new training tool the dog should be introduced to it properly. Introduce the new type of bumper; it may smell and fly differently than the bumpers you use. In some cases the dog thinks the flapping bumper is a live flyer and will hunt to find a bird. This is temporary and is quickly learned. Then introduce images, different sounds, motion and sound of shot. This can be accomplished in normal yard training. Now you will see your dog's eyes light up every time you put Bumper Boy into your car.

Components of the Bumper Boy Ultra II

Standard Ultra II Package (Figure 1)

- Bi-Directional Launcher with receiver
- 100 blank .22 caliber shells
- Pro transmitter
- Owner's manual
- Battery charger
- Standard speaker: Attention getting chirping sound
- Two Smart Bumpers with streamers and throw handles.



Figure 1. Standard Bumper Boy Ultra II Components

Optional Equipment

Advanced sound system– (Figure 2a)

- Duck, pheasant, goose, and human sound
- Very loud horn speaker

Super Birds– (Figure 2b)

- Provides a complete substitute for dead birds
- High-flying and very motivational

Camo Case– (Figure 2c)

- Carrying bag provides for easy field movement
- Case holds two launchers, with bumpers, and electronics



Figure 2a:
Advanced Sound
System



Figure 2b:
Superbirds



Figure 2c.
Camo Case

Double-sided gunner image with launcher mount and motion motor attachment (Figure 3) (Unit must have the advanced sound system) –

- Simulates the movement of a person in the field
- Provides queuing, help, and simulates retired guns
- Ultra-light and compact – 3lbs



Figure 3. Image/Motion Attachment

Bumper Boy Description

Pro Transmitter (Figure 4)

Controls sound and launching during operation.

Pro Transmitter Overview. The transmitter Controls sound, motion and launching during operation. During programming, it selects features for programming and controls programming process. Figure 4 shows the layout of the transmitter control panel.

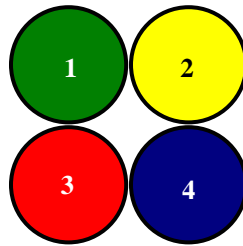


*Note: color scheme to be same
As previously produced overlays*

Figure 4. Pro Transmitter

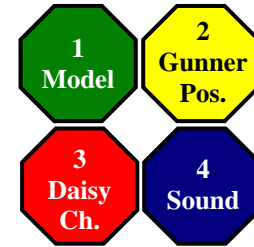
The transmitter communicates with the launchers programmed for operation under its control by a radio frequency link. It uses one of over 17,000 frequency and digital code combinations to virtually eliminate interference from other transmitters. The frequency and code combination is synchronized with the receiver on the launcher during the programming steps. The keys are arranged in three columns for convenience during operation. The left column controls the sound programmed for the launcher designated by the number on the key. The middle column controls motion for the designated launcher, if the motion module is installed. The right column controls launch for designated launcher number. The printed words on the launcher keys designate to the functions controlled during programming.

The transmitter programs and controls up to four launchers. They are designated 1 through 4 on the keys in the LAUNCH column. These keys are used to launch SmartBumpers or Super-birds from the launcher designated on the key. They are used to select the launcher number during programming.



During operation, the SOUND column turns on the sound programmed into the launcher corresponding to the launcher number on the SOUND key. During programming, the SOUND column selects the sound to be programmed into the selected launcher. That sound is noted on each key. For units with standard sound (chirping) no other sounds can be programmed.

During operation the keys in the MOTION column control optional motion unit movement for the launcher number noted on the key. During programming the MOTION column is used to select the feature to be programmed.



ARM / ON key - This key provides a safety switch that prevents the unit from transmitting a launch command when in the off position. The safety or on condition is indicated by the display of the red safety light. The red light indicates that the unit is armed and ready to launch.

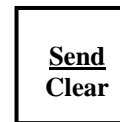


Red light "OFF" safety "ON" Armed (caution)

Note
The transmitter will automatically disarm after 45 seconds. After this period the ON/OFF key must be pressed again in order arm the system.



PROGRAM Key – is used to synchronize and program the transmitter to the launcher.



SEND/CLEAR Key – is used to send the program to the transmitter with the receiver, or, to reset the order bumpers are launched.

Other transmitter features are:

Charger Receptacle – Accepts connector from the four-lead wall charger to recharge the included Ni-Metal Hydride battery.

Antenna Connection – Accepts the antenna for communication with the receiver unit.

Antenna – Required for communication between the transmitter and receiver.

Lanyard Ring – For attaching the transmitter to a lanyard.

Ultra II Launcher

The Bumper Boy launcher projects Bumper Boy Smart Bumpers or Super Birds. (The term “bumpers” used in this manual generally refers to both Smart Bumpers and Super Birds). The receiver unit accepts the coded launch signal from the transmitter and activates the servos that control launch.

Receiver (Figure 5)

The receiver is mounted loosely on the end of the launcher frame and connected to the sound speaker and the mechanical servos that initiate launching a bumper.



Figure 5. Ultra II Receiver

The main features of the receiver are:

Toggle Switch (Figure 6)

Program Position - When the toggle switch is in the left position the receiver will accept a new program and can be synchronized with the transmitter

On Position - When the toggle switch is to the right the unit will be ON.

Off Position - When the toggle is in the center, or off position, the unit will turn off. The toggle switch must be in the off position in order to charge the battery.

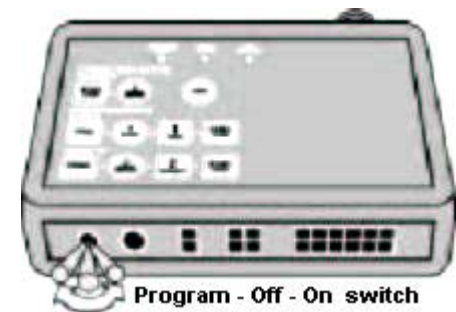


Figure 6. Toggle Switch

Indicator Lights

Flashing Green
(Program Mode)

Program Mode (Green) – A green light indicates that the receiver is ready to receive a program. This green light

will go out when a program or synchronization has been completed.

Flashing Red
(ON Mode)

On Light (Red) – Indicates that the launcher circuits are ready to launch a bumper. The red on light will also flash

when receiving commands from the transmitter.

LOW
BATTERY

Low Battery Light (Red) – Blinking red light indicates that the batteries need to be recharged. Normally the unit

will continue to function for the day it first starts blinking; though, when the system detects a low battery condition, it shuts off the sound to conserve power. During charging the low battery light will flash indicating charging is occurring.

Antenna Connection - Accepts the antenna for communication with the transmitter.

Charger Connection - Accepts connector from the four-lead wall charger to recharge the included Nickel - Metal Hydride battery.

Advanced Sound (2 Pin) Connector - Connects receiver to the optional advanced sound (duck) system.

Standard Sound (4 pin) Connector - Connects the standard (chirping) speaker or the optional motion accessory to the receiver unit.

Servo (12 pin) Connector - Connects receiver to the launcher.

Frame and End Plates – (Figure 7 – two shooter shown) Support the launcher assemblies, receiver, speaker, and angle adjustment rods.

Collapsible Stakes – Help Support the unit during launches.

Angle Adjustment Rods – Threaded rods support the firing plate and provide the means of adjusting the angle of the launcher tube.

Removable End Plate – The end plate opposite the receiver can be easily removed using wing nuts to change the direction of one launcher assembly.

Launcher Assemblies – (Figure 8) Each launcher Assembly contains all the components for launching a bumper.



Figure 7. Bumper Boy Ultra II Frame and End Plates



Figure 8. Bumper Boy Launcher Assembly

Figure 9 (opposite page) is a detailed drawing of the launcher assembly and its component parts. Principal components and their functions are:

Firing Assembly:

Launcher Assembly Latch – Secures the Firing Assembly to the Launcher Assembly Barrel and Firing Plate.

Firing Pin Assembly – Contains the mechanical components that set and ultimately release the firing pin. Includes:

Cocking Handle - Pulls the firing assembly to the cocked position.

Servo - Moves the servo arm to pull the lever arm from the firing assembly.

Servo Arm - Activates the Lever Arm.

Lever Arm - Sets and releases the Firing Pin.

Firing Pin - Activates the .22 caliber blank cartridge.

Barrel and Firing Plate:

Barrel – Accepts the Smart Bumper or Super Bird for launching.

Breech – Accepts a .22 cal blank cartridge to provide the energy to launch Smart Bumpers or Super Birds.

Ejector – Pulls the spent cartridge from the breech to assist with removal of the shell.

Firing Plate – Provides a platform to secure the launcher assembly to the frame of the launcher. The Angle Adjustment Rod fits into the thread rod insert at the edge of the Firing Plate.

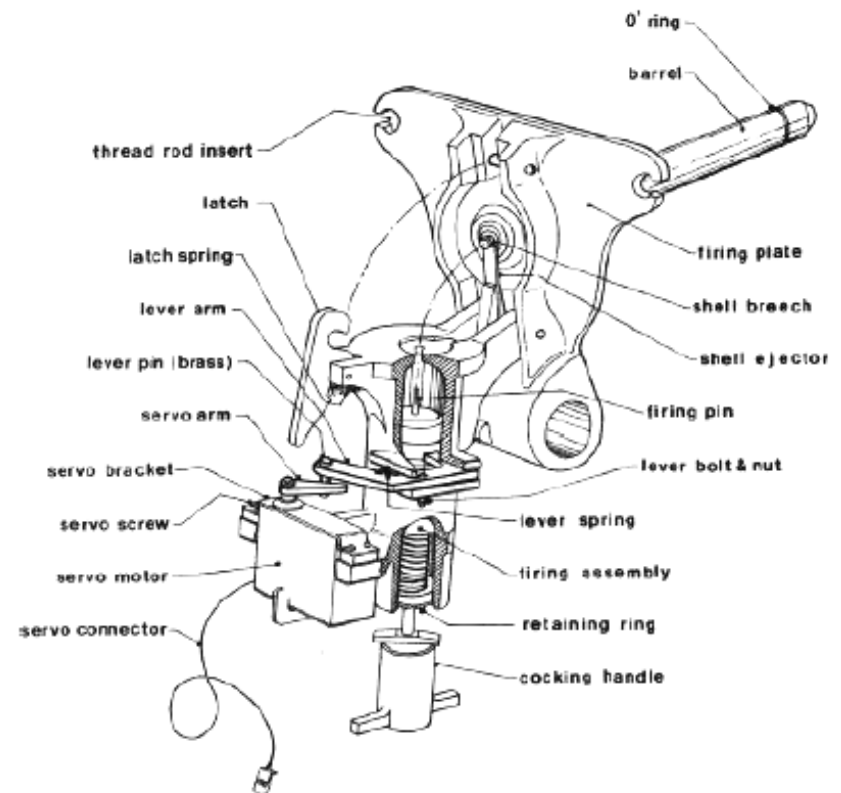


Figure 9. Launcher Assembly Cutaway Drawing.

Figure 9 shows the mechanical firing mechanism in the Firing Assembly. When the cocking handle is pulled down, the firing pin is pulled back from the firing chamber and the firing pin spring, part of the firing assembly, is compressed. The spring-loaded lever arm falls into a keyway in the firing pin and firing assembly. You will hear a distinct click when the lever arm falls into the keyway, releasing the firing pin. The firing pin initiates the .22 caliber blank cartridge, launching the bumper.

Theory of Operation

Bumper Boy provides a means to present a variety of training scenarios to your dogs. Radio links allow the trainer to control the scenario from the line. Digital coding virtually eliminates interference from other systems working in the immediate training area. Use of Bumper Boy accessories such as the motion simulator and sound module provide additional resources to help develop your dog's skills.

The Smart Bumpers, streamers, reversible bumper covers, and brass bumper weights allow you to further customize your training options based on your dog's experience. The brass bumper weights are inserted into one of the two holes in the end of the smart bumper thus influencing its floatation displaying the color you choose.

The Bumper Boy Ultra II Transmitter has two functions, 1) programming and synchronizing the receiver with the transmitter and 2) transmitting the signal to activate launcher functions, such as launching a bumper.

The Bumper Boy Receiver accepts a valid code sequence and the launch signal and activates the launch servos to initiate launch. The launcher projects Smart Bumpers or Super Birds with energy generated by firing a .22 blank cartridge. If equipped, the trainer also activates the sound and motion remotely with the Bumper Boy transmitter. On receipt of the correct coded signal the receiver activates the speaker, motion servo or the launcher servo. The launcher assembly servo releases the launcher firing pin, firing the .22 cal cartridge.

Quick Start Your Bumper Boy Ultra II Series System

Unpack the Bumper Boy

Make sure you have received all the equipment ordered.
Standard Equipment:

- Smart Bumpers (equal to the launcher assemblies on your system)
- Streamers for the Bumpers
- Power Handles, (black spheres with holes to accommodate the bumper ropes), for hand throwing bumpers
- Standard Speaker or Advanced Speaker
- Wire Ties
- Ultra II Launcher with Receiver
- Pro Transmitter
- Antenna – 2
- Brass Bumper Weight on a Black String, for roll over feature during water test. (Insert into appropriate hole at the top of the bumper.)
- Silicone Grease, for occasional use on "O" rings

Assemble the Components

Transmitter Assembly

- Screw the antenna into the transmitter antenna connection.

Receiver Installation

- Mount receiver into the slotted area in the end plate.
- Loosely fasten the receiver to the end plate, with the antenna receptacle up, using the washers and nuts furnished.

Note

Do not tighten the receiver against the end plate. It should be mounted so that it will slide up and down easily in order to reduce the effect of recoil.

- Install the male 12-position launcher connector to female connector on the receiver. Press firmly to make sure connector is engaged.
- Secure the excess cable to the receiver with the wire tie furnished.
- Install the antenna into the antenna connection.

Standard Speaker Installation (See Figure 5)

- Remove the Velcro Strip with the adhesive backing from the Standard Speaker by separating it from the Velcro patch attached to the speaker.
- Remove the adhesive backing from the Velcro strip and attach the strip to the top of the receiver. Install the tape with the long axis along the long axis of the top of the receiver.

- Attach the small speaker to the Velcro. Orientation of the speaker can be changed to point toward the working dog in the field.
- Route the speaker cable behind the end plate, through the cable access slot, to the bottom of the receiver.
- Plug speaker into the 4-position plug on the receiver labeled motion.

Advanced Speaker Installation (Figure 10)

- Install flat head of the bolt into the receiver slot and tighten.
- Route the connector and wiring behind the end plate and through the cable access slot.
- Plug the two-pole male speaker connector into the two-pole speaker connection on the receiver. (Labeled "sound"). Use the wiring strap to secure excess wire. Leave sufficient slack to permit rotating the speaker 180 degrees.
- The mounting swivel can be used to orient the speaker towards the working dog.



Figure 10. Advanced Speaker Installation

Assemble the Bumpers (Figure 11)

- Slide a streamer over each bumper rope.
- Tie a figure eight knot (a fat overhand knot with an extra loop across the back) in the bumper rope to secure the streamer near the top of the bumper.



Figure 11. Bumper Assembly

- Slide the end of each bumper rope through a Power Handle. The rope should feed out of the Power Handle through the depression
- Tie a figure eight knot near the end of the bumper rope and pull the knot into the depression.

Charge the Receiver and Transmitter Batteries

Use the charger furnished with your Bumper Boy (Figure 12). To avoid over charging and possibly damaging the batteries wait until you get a low battery light before charging a transmitter or receiver.



Figure 12. Battery Charger

Charge the Receiver

- Move the toggle switch to the “off” position.
- Plug the charger into an 110V AC outlet.
- Plug a charger connector into the charging receptacle on the receiver. Charging is indicated by a flashing red light.

Charge the Transmitter

- Plug the charger into an 110V AC outlet.
- Plug a charger connector into the charging receptacle on the transmitter.
- Press the “**Arm/On**” key. Transmitter will indicate charging by displaying a flashing red light.



Both transmitter and receiver will charge for approximately 8 to 12 hours, and then turn off automatically. (Flashing red charging light will stop.) Disconnect the charger.

Program the Transmitter

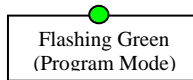
Each transmitter has a unique digital code and must be synchronized with the receiver in order to communicate with each other. Programming is conducted to select sound features and designate the gunner station assigned to each launcher when receiving new equipment or changing features. Though synchronization may already be done at the factory, this process can be accomplished through the following procedure.

For One Launcher:

Step 1

At the Receiver

- Move the receiver toggle switch to the left (program mode). "Program" and "On" lights are on, then the "On" light turns off.



At the Transmitter

Step 2

- Ensure that the transmitter is off (Red "Safety" light off).
- Press the "PROG" key
- Red "Armed" light turns on.



Step 3

- Press the blue "4 Sound" key in the middle column. One of the lights along the left side of the keypad goes on as a result of previous settings. On a new unit it will probably be the green "1 Duck" key in the left column.
- Standard Sound system, go to step 5.



Step 4. (Advanced Sound only)

- Select the desired sound by pressing the key describing that source in the sound column. The red light along the left edge of the transmitter will indicate your sound selection.

Step 5

- Press the red "3 Daisy Ch." key in the middle column. Low battery light goes on. If not, press the green "1 Duck" key in the left column.



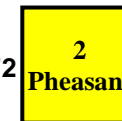
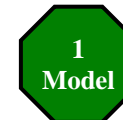
Step 6

- Press the yellow "2 Gunner Pos." key. This allows you to select the key color that will control that launcher. If your unit has not previously been programmed the "Low Batt." light will normally go on.
- Select the 1-4 for the button color you want to control that launcher. For one launcher press the green "1 Duck" key in the left column. The "Low battery" light next to that key will light if it was not already on. If you are programming additional launchers select the desired number and color in the left column.



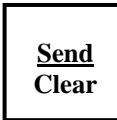
Step 7

- Press the green "1 Model" key at the top of the middle column to set the transmitter for selecting the Bumper Boy model. Select the model of launcher you are programming as follows:
 - For the 2 Shooter press the yellow "2 Pheasant" key.
 - For the 4 Shooter press the blue "4 Goose" key.
 - For the 8 or 12 shooter press the red "3 Human" key.



The light beside the selected key should be on.

Step 8

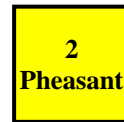


- Press the white “**Send/Clear**” key.

For Multiple Launchers:

For programming multiple launchers, first go through steps 1 through 8 for your Number 1 launcher. Then for your Number 2 launcher:

- Turn the receiver on the Number 1 launcher off.
- Repeat steps 1 through 5 for your Launcher 2.
- Press the yellow “**2 Gunner Pos**” in the middle row. The “low battery” light beside the “#1 duck” key should now be on.
- Press the yellow “**2 Pheasant**” key and the light beside this key should now come on.
- Repeat steps 7 & 8 for your Number 2 launcher.



To program a third and fourth launcher, repeat the instructions for multiple launchers, assigning the “**3 Human**” key to Launcher 3 and the “**4 Goose**” key to launcher 4. Turn each launcher receiver off before programming the next launcher.



If you have difficulty completing these programming steps call Bumper Boy Technical Support at (800)729 3822.

Chaining Launchers

Chaining allows up to four launchers to be designated as a single gunner station for release of up to 16 bumpers from that location. For instructions for chaining launchers call Bumper Boy Technical Support, 1-800-729-3822.

Prepare for Field Operation

In House Test

This test confirms that the transmitter and receiver are functioning properly and that the servos are activated in sequence.

At the Launcher:

- Open the launcher assemblies by pressing the latch, (see figure 9), to unlatch the firing plate
- Turn the receiver to “ON”, (toggle switch to right) The “ON” light will go on, and then the light will turn off indicating the unit is ready for operation.

CAUTION

Do not cock the firing pins. Damage to the firing pin or breech may result if this test is conducted with the breech closed, and the unit cocked with no cartridge in the receiver. DO NOT conduct the test with a live cartridge in the receiver.

At the Transmitter:



- Press the “**Arm/ON**” key . Red light indicates that the safety is disengaged and the unit is armed and ready to fire.

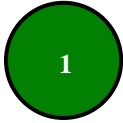


- Press the “**SOUND**” key. The speaker responds with sound (duck or chirp).

- Press and hold the “**LAUNCH**” key  for one or two seconds.

At the Launcher:

- You will see the servo activate. By pressing the “LAUNCH” key again the other servo will activate. Press again and the first servo will continue to activate. The system will loop through this sequence with a longer delay after the second activation.



Load Test

This test confirms that the servos activate the trigger and release the firing pin. No cartridges should be loaded for the test.

At the Launcher:

- Open the breech for each Launcher Tube
- Cock each Firing Assembly. Pull the Cocking Handle down until you hear the firing pin fall into the keyway (distinct click).
- Repeat the In House Test.
- Observe that the firing pin moves from within the firing assembly to the position that will initiate the .22 blank cartridge.

Note

Opening the breech prevents the firing pin from striking the edge of the breech. As long as the breech is open you can run this test without damaging the firing mechanism.

Safety

The launcher can project bumpers at life threatening velocities. When loaded, it can be as dangerous as a gun. It should be treated like a weapon.

- Children should not have access to the equipment or ammunition.
- At no time should you lean over the launcher during the loading process.
- Turn the power on before loading the launcher to stabilize the electronics.
- When cocking the launcher, make sure each trigger is positively engaged (listen for the click).
- Never point the launcher at anything except sky.
- Never move the launcher when loaded.
- Clear the breech when you have finished your training.
- Unlatch firing mechanisms and remove shell.
- DO NOT turn off electronics before unlatching and removing shell.

CAUTION

DO NOT setup in tinder dry grass. It is possible that the .22 cal. hot gases could start a grass fire. In any dry area caution should be used by placing a fire protection blanket or rubber mat under the launcher.

Operation in the Field

Your Bumper Boy is a flexible tool that will provide realistic training situations to prepare your dog for hunting and competition. The following step-by-step procedures will assist you to safely and effectively use the Bumper Boy in your training program.

Tip

Run the In House Test, and check the sound function, the night before you plan to use your Bumper Boys. If you observe a low battery light on either the transmitter or the receivers, or the sound does not activate at the launcher, charge the batteries in those components.

Plan the Scenario

Examine the terrain and choose the lines you wish to use to challenge your dog. Select the location for setting up the launcher, the area of fall for the bumper or Super Bird, and the location of the line from which you and your dog will run the scenario. Consider the effect wind may have on the path of the bumper and the dog's performance.

CAUTION

Inspect the line your dog may run to the area of the fall for holes, hidden ditches or other obstacles that may injure your dog. Be sure there is no vegetation or other obstructions overhanging the location you have selected for the launcher or in the line of flight of the bumper.

CAUTION

Ensure the launcher is not set up on dry grass to avoid an accidental fire.

Configure the Launcher (Bi-Directional Mode)

The Ultra II Bumper Boy 2 and 4 shot models can be configured to launch the bumpers in one direction, or in opposite directions. The unit is shipped with all launcher tubes oriented in the same direction. To configure the unit to launch bumpers in opposite directions proceed as follows:

- Remove the three wing nuts and their associated washers and lock washers.
- Remove the end plate.
- Rotate the threaded angle adjustment rod(s) for the removable launcher assemblies past the top of the frame or end plate, so they lie on the opposite side of the launcher frame when the end plate is replaced.
- Pull the near Launcher Assembly(s) and the spacer from the launcher frame.
- Rotate the Launcher Assembly(s) 180 degrees in a horizontal plane.
- Replace the Launcher Assembly and the spacer on the launcher frame

CAUTION

Be sure the wires leading to the launcher tube servo are free to remain slack when the launch tube is rotated on the launcher frame and the launcher tube breech is opened.

- Replace the end plate and the washers and wing nuts.

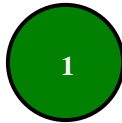
Use the same method to return the launcher assemblies to the same direction.

Selecting Firing Order

If your launcher is set up in bi-directional mode you need to know which launcher tube will fire first. This can be accomplished in two ways.

Method 1

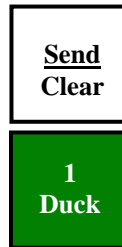
- Conduct the In House Test (page 23).



- Press the “**LAUNCH**” key and observe which servo is activated. The other launch assembly will fire next.
- Orient the launcher to fire that tube first, or, repeat to cycle to the other launch assembly.

Method 2

- Reset the transmitter.
- Press the “**Send/Clear**” key,
- Then press the “**Sound**” key.



- The launcher assembly closest to the receiver will fire first.

Field Setup

Your Bumper Boy is a flexible tool that will provide realistic training situations to prepare your dog for hunting and competition. The following step-by- step procedures will assist you to safely and effectively use the Bumper Boy in your training program.

CAUTION

Inspect the line your dog may run to the area of the fall for holes, hidden ditches or other obstacles that may injure your dog. Be sure there is no vegetation or other obstructions overhanging the location you have selected for the launcher or in the line of flight of the bumper.

Move Launcher to Gunner Station

- Select a flat surface with sparse cover. Be sure there are no overhead tree branches that may interfere.
- Deploy the launcher legs.
- Align the firing tubes to orient them to the area of the fall.
- Firmly push the launcher legs into the ground to provide a stable launching platform.
- Check the firing order if you have set the launcher to in the bi-directional mode. See page 28, “Selecting Firing Order”.

Height & Angle Adjustment

You can vary the range from the launcher to the bumper impact by varying the angle of the firing tubes using the angle adjustment rods, varying the position of the bumpers on the barrels, by the power of the load (Green, Yellow, Red), or by reducing air friction (by making the streamers smaller).

The optimum angle of the barrels is between 55 and 75 degrees from the horizontal. Increasing that angle will cause the bumper to travel higher and shorten the range to bumper impact. Reducing the angle will result in a lower trajectory

Note

Do not depress the launcher assemblies beyond the red mark on the angle adjustment rods

The range to the point of impact may also be varied by adjusting the position of the bumper on the firing tube. Maximum range (45 to 50 yards) will be reached by sliding the bumper all the way down the tube. Range will be reduced if the bumper is slid only part way down the tube. Using Red Power loads and reducing the size of the streamers will also increase range.

Load the Launcher

WARNING

Never place your body or body parts in the path of the bumpers or in front of the launching tubes. Serious injury can result if the unit accidentally fires.

- Turn the receiver toggle switch to the “on” position.
- Slide the bumpers onto the launcher tubes.
- Disengage the angle adjustment rod from a launcher firing plate.
- Rotate the firing plate and barrel 180 degrees so the breech and servo assembly are up and the bumpers are down.
- Unlatch the firing plate and open the breech.
- Insert a .22 caliber blank cartridge.
- Close the breech.
- Rotate the launcher to the launch position (bumper up).
- Secure the launcher firing plate on the angle adjustment rod.
- Adjust the angle of the bumpers, using the angle adjustment rods, to meet your scenario, if necessary.

Repeat the loading process with the second launch tube assembly.

- Cock the firing assemblies. Pull down on both cocking handles until you hear a distinct click.

CAUTION

Do not release the cocking handle until you hear the firing pin keyway engaged by the trigger. It will make a distinct click.


CAUTION

Cocking the firing assemblies is ALWAYS the final step. Extreme caution should be taken, as the unit is loaded and can fire. Never lean over the launcher or be in the line of fire. Never move the unit unless you unload the launcher first. (See page 33 – Unloading a Loaded Launcher)

Run the Scenario



Launch the Bumpers

At the transmitter:

- Press the “**ARM / ON**” key.  The red light under the “ARM / ON” key turns on.

- Press “**SOUND**”  to direct your dog’s attention toward the launcher.

- Press “**LAUNCH**”.  Hold for one second. The bumper nearest the receiver launches.

- Press “**SOUND**”  and “**LAUNCH**”  again, as required to complete your setup. The second bumper launches.

Note

If more than 45 seconds elapse between activating any key, the transmitter will revert to a not-armed condition. If the “Armed” light is not on, press “**ARM/ON**”



before attempting to launch the second bumper.

- Open the launcher breech.
- Disengage the angle adjustment rods and rotate the launcher tubes 180 degrees.
- Remove the expended cartridges.
- Reload the launchers.

Note

Do not leave expended cartridges in the launcher. Corrosion could damage the launch tube or freeze the cartridge in the breech.

Unloading a Loaded Launcher

WARNING

Never place your body or body parts in the path of the bumpers or in front of the launching tubes. Serious injury can result if the unit accidentally fires.

- Open the breech by pressing the firing plate latch (See Figure 9) from the rear of the firing assembly with your index finger.
- Hold the firing mechanism away from the breech from the rear, with your index finger the on brass lever pin.
- Squeeze the brass lever pin to release the firing pin.

- Disengage the angle adjustment rod from the firing tube base.
- Rotate the launcher tubes and bumpers to the breech up position.
- Remove the cartridges.

Wet Weather Training

The transmitter and receiver are water resistant and can be used in all weather conditions. If immersed, dry thoroughly before attempting to use the system. During continued water-work, the inside of the Bumper tube should be dry. If the tube is wet, a loss of power may occur. Drying can be accomplished by spinning the Bumper by the power handle and throw rope, by using a drying rack to let the water drain out, or by using a shotgun brush with a cloth or shammy material wrapped around it. Ensuring the "O" rings on the launcher assemblies are properly greased will also help.

Fire Warning

In dry conditions, hot gases from the .22 cal shell could cause a grass fire. ALWAYS use a rubber mat or fire blanket under the launcher.

Bumper Boy Maintenance

Bumper Care

Keep the bumpers clean. Clear accumulated grit and carbon from the bumper barrel with a 12-gauge shotgun soft cleaning tip. DO NOT oil the barrels.

Launcher Care

Keep launcher components clean. Check to insure the nuts securing the launcher frame components are secure. Periodically (every three to six months) clean accumulated carbon and grit from the launcher tube barrel with a .22 caliber cleaning rod and cleaning patch soaked in light oil. Clean the exterior of the launcher tube. Apply silicone grease to the "O" rings on the launcher tubes monthly. Worn "O" rings can be purchased at most automotive stores. Part # N70113 Size - 9/16th. Use "Dry Graphite" lubricant to lubricate the firing assemblies every three months. Introduce the graphite lubricant through into the firing pin hole, with the firing pin in the cocked position and on both sides of the lever arm where it is held by the bracket integral to the launcher assembly.

Transmitter and Receiver Care

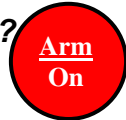
Store in a dry environment. Recharge the batteries after several days of use.

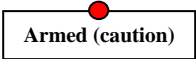
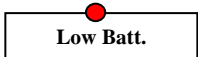
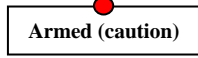
Trouble Shooting Guide

Misfire

One or both launch assemblies misfired. That is, you attempted to launch but failed to launch one or both bumpers.

Did you turn on the transmitter?



- Press the “ARM/ON” key.
 - IF the red light under the “ARM / ON” key turns on  press and hold the “LAUNCH” key for two seconds.
 - ♦ If the launch event occurs you probably forgot to arm the transmitter, or more than 45 seconds elapsed after you armed the transmitter. Continue training.
 - ♦ If you observe a “Low Batt.”  Warning light you will normally be able to continue training; however, system performance may become unreliable.
 - ♦ If the launch event fails to occur, proceed with Troubleshooting the launcher (on the next page).
 - IF the light below the “ARM / ON” key fails to turn on charge the transmitter battery. 
 - ♦ Following the recharge, conduct the “In House test”.
 - ♦ If the test is not successful call Bumper Boy Customer Service at 1-800-729-3822.

Troubleshooting the launcher

Did you turn the receiver on (Receiver toggle to the right)?

- If not, turn it on. You may continue with your training at this point.
- If yes, continue.

Are the firing pins cocked?

- If not, you may cock the firing assemblies and proceed with your training.
- If yes, continue.

If the firing pins are cocked and the receiver was on:

- Unload the launcher (see page 33, “Unloading a Loaded Launcher”).
- Conduct the In House Test and Load Test to determine if the system is functioning properly.
- ♦ If the tests are successful, repeat the loading and firing sequence and proceed with your training.
- ♦ If the tests are not successful, check all electrical connections and repeat the tests.
- ♦ If the tests are still unsuccessful proceed as follows:

Sound does not work

Complete these steps only after following procedures for “Unloading a Loaded Launcher” (page 33).

- Check the speaker connection at the receiver. If it is loose, secure the connector and activate the sound again.

- If the sound still does not work, press the sound key and check to see if the “**Low Battery**” warning light comes on at the receiver. When the receiver detects a low battery condition, it will turn off the sound system. Recharge the receiver battery.
- If the sound still does not work call Bumper Boy Customer Service at 1-800-729-3822.

Servo operates, but does not fire consistently

Complete these steps only after following procedures for “Unloading a Loaded Launcher” (page 33).

- Lubricate the Firing Assembly See page 35, “Launcher Care”.
- Check for free movement of the lever arm by squeezing the brass lever arm pin against the firing assembly. If it does not move easily in and out of the bracket holding it to the firing assembly loosen the lever bolt and nut. The lever bolt should turn freely within the bracket but should not be move noticeably up and down.
- Check the launcher wiring harness and receiver connector. If the connector is loose, secure it in its connector. If the harness is damaged call Bumper Boy Customer Service at 1-800-729-3822.
- Check servo arm alignment. If it does not re-align as shown in Figure 9 replace the servo.
- Conduct the In House Test. If the test is still not consistently successful call Bumper Boy Customer Service at 1-800-729-3822.

Firing pin will not cock

Complete these steps only after following procedures for “Unloading a Loaded Launcher” (page 33).

- Lever cannot return because the servo arm is touching the lever pin and is not returning to the correct alignment. Replace the servo.
- Check for free movement of the lever arm by squeezing the brass lever arm pin against the firing assembly. If it does not move easily in and out of the bracket holding it to the firing assembly loosen the lever bolt and nut. The lever bolt should turn freely within the bracket but should not move noticeably up and down.
- Lubricate the Firing Assembly See page 35, “Launcher Care”.

Replacing a Servo

Complete these steps only after following procedures for “Unloading a Loaded Launcher” (page 33).

If a servo motor needs to be replaced, they can be purchased locally from many hobby stores or directly from Bumper Boy at 1-800-729-3822. Servo type is any compatible GWS series.

- Cut heat shrink open at servo connector – located about 11 inches back from servo
- Pull apart wiring harness from connector
- Remove all four servo mounting screws and retain for mounting the new servo.

- Note the orientation of the servo in the “L” shaped bracket under the servo. Remove the faulty servo.
- Remove screw that secures the servo arm to the faulty servo. Set the screw, servo arm and the mounting bracket from the top of the faulty servo aside for mounting the new servo.
- Install the mounting bracket and servo arm on the new servo. The servo arm should be aligned so that the Arm will be on the right side of the brass lever pin, (looking past the receiver to the lever pin), but not past the either edge of the servo. Observe the orientation of the lever arm on another launcher assembly for comparison.
- Re-install the servo mounting screws. Use caution not to over tighten the screws.
- Plug new servo into wiring harness. Put new heat shrink tubing on wiring harness, match wiring harness colors, and press connector together.
- Test servo by turning the receiver toggle switch to PROGRAM. This sets the servo. If servo does not activate, reverse the connector. It should move back and forth slightly but remain in the position described above. If it does not, remove the servo arm screw, re-orient the servo arm, and replace the servo arm screw. Now turn the receiver toggle switch to OFF, then back to PROGRAM. The servo arm should flicker and remain in the position. If it does not, call Bumper Boy Customer Service at 1-800-729-3822.
- Apply hot glue on plug, cover with the heat shrink tubing, and shrink with a hot air gun, blow dryer, or lighter. Re-install wire ties to secure the wiring harness.

Thank you for purchasing the
Bumper Boy Retriever Trainer

Customer Service
1-800-729-3822