CLAY DELAY APC Wireless Autopuller Owner's Manual

CLAY DELAY APC Wireless Autopuller Owner's Manual

The Wireless Autopuller®
By CLAY DELAY INC.
Owner's Manual
Models APC and APD

CLAY DELAY INCORPORATED
115 Roycroft Dr. West Seneca NY 14224
Phone 716-674-4489 E-mail: autopullers@claydelay.com
www.claydelay.com

Features of the Autopuller Deluxe

- Voice control with instant response
- 2 customer selected routines
- Auto-off after 30 minutes of non-use

Features of the Autopuller Custom

- 3 customer selected routines
- Adjustable Auto-off after of non-use

Components of the Autopuller Package

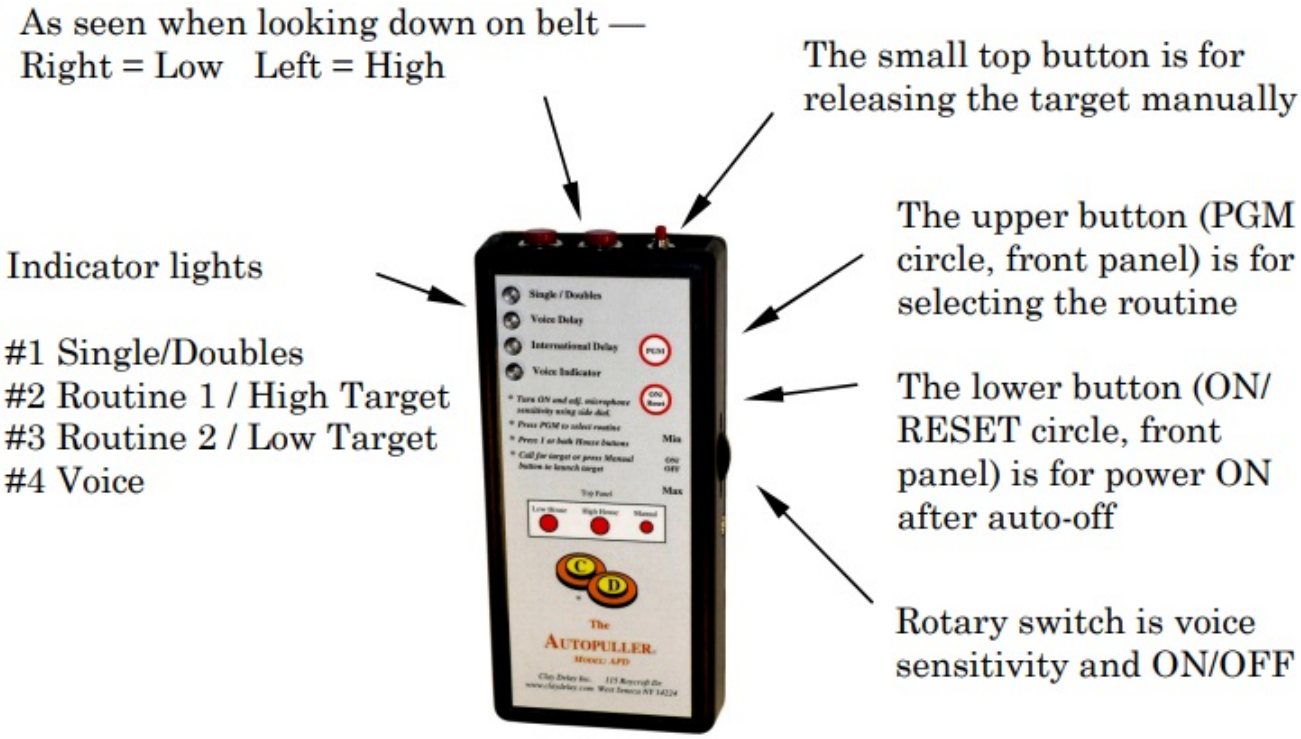
- Autopuller Controller
- Autopuller Receiver
- (2) 9-volt Alkaline batteries
- (2) Spare Fuses
- Microphone
- (2) Adapter Cords and Identifier tags
- Small Screwdriver
- Instruction manual (this document)

Contents

You are responsible for obtaining and properly attaching your course connector to the Autopuller adapter cord. Wiring Information regarding attaching connector can be found starting on page 23.
The Autopuller controller and receiver are preset to work in most environments. You simply connect the appropriate machine connector to the adapter cord, install the batteries, plug in and shoot.
If you find that a particular function is not performing theway you like, please check the manual for that function and make the necessary adjustments. If you are still having
difficulties, refer to the troubleshooting section. Of course, if you have any questions or need more direction, don't hesitate to contact us.

The Autopuller Deluxe and Custom Controller

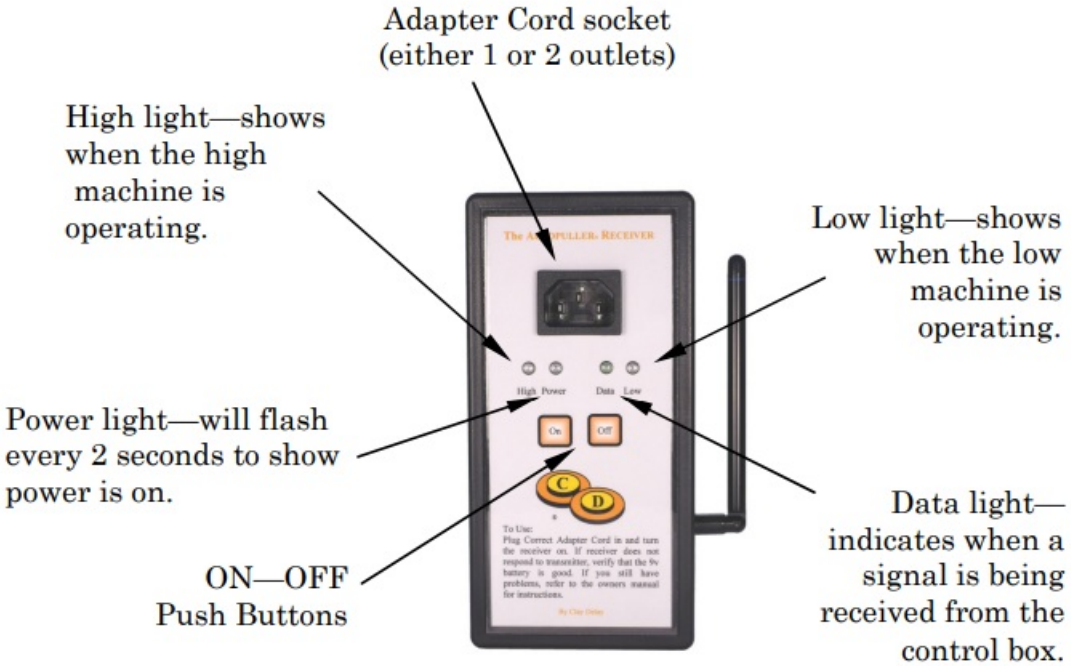
has 7 controls and 4 indicators
The large top buttons are for arming the target machine



MICROPHONE The microphone used for the Autopuller is a standard microphone used for a computer. Using this style helps in keeping the costs down and it is readily available if a problem occurs with the supplied unit.

The Autopuller Receiver

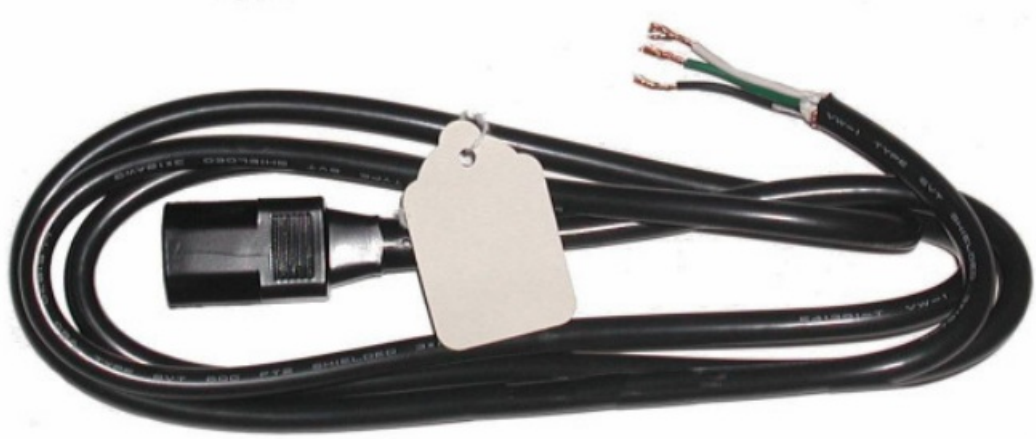
has 5 controls and 4 indicators



Inside the battery compartment are the switches for:

- Machine pulse see page 20
- Auto-off see page 21
- Controller synchronization see page 22

ADAPTER CORD The adapter cord is the interface between the Autopuller receiver and the target machine. The wiring of the adapter cord determines how the target machine will operate.



Using an incorrectly wired cord or using the cord from a different location may damage either the receiver or the target machine!

Normal Operation

1. Turn the receiver on, by pressing the ON symbol on the front panel. The power light will stay on for 2 seconds, then start to blink. This is now the standby state.
2. Plug the adapter cord into the pull cord socket and into the receiver and raise the antenna.
3. Turn the controller on, by rotating the side adjuster from the off position. The Single/Double light will be

blinking. (If the controller does not turn on, press the ON/RESET indication on the front panel.) This is now the standby state. A target will not be released until a target machine is armed.

4. Use the side adjuster to set the sensitivity of the microphone. With the microphone plugged in and clipped to your collar, use the voice light on the front panel to adjust for your call. (Refer to page 18 for more information on the microphone adjustment.)
5. Pressing an arming button will hold the Single/Double light on, and set the controller in an active state. (For the skeet model, press either large button for a single target or both buttons for doubles). A target will now release in response to your call. The target lights on both the controller and receiver are visual indicators that “show” which target is launched. After each target is launched, the controller will go back into the standby state, thus preventing false targets.
6. If you are shooting with a companion, arm the target(s) as usual. When your companion calls for their target, press the small button on the top panel. This will launch a target the same as when you call using the microphone, but since “you” are now the delay, any voice delay or time delay will be set to 0. The second problem may be the microphone

Using the Routines:
Not all routines are capable of functioning together. An example would be Following Pair and Report Pair. It is not possible to combine those together. If the two routines are compatible, a combination routine would be available to you. An example would be Voice Delay and Report Pair. As you press the PGM button, the sequence would be:
Single / Doubles (Start point)
Voice Delay
Report Pair
Voice Delay with Report Pair
OFF
Single / Doubles

Routine Light	Single	VD	RP	VD w RP	OFF
Single	Blinking				Blinking
Voice Delay		Blinking		Blinking	Blinking
Report Pair			Blinking	Blinking	Blinking

After an arming button is pressed, the unit will go into an armed state. The indicator light goes from blinking to steady. If no target is released within 30 seconds, the unit goes back into the standby mode. For the modes that involve a gun released second target, the timer decreases to 4 seconds for the second target. When a target is released, 1 or both of the routine lights will turn on, for the length of the transmitter signal. This is a troubleshooting tool that “shows” that a target has been released.

Routines Available

Examine the front panel of your Autopuller to determine which routines are loaded in your unit. Many of the routines are adjustable and allow you to fine tune the response to better fit your style of shooting.
Pull Cord (Trap/Skeet/Sporting Clays)
This function turns the voice feature and all delays off, and releases a target immediately at the press of the arming button. The manual button is used to release a True Pair/ Double. This is the same as the existing hand

held release presently connected to the machine.

Random Target (Skeet)

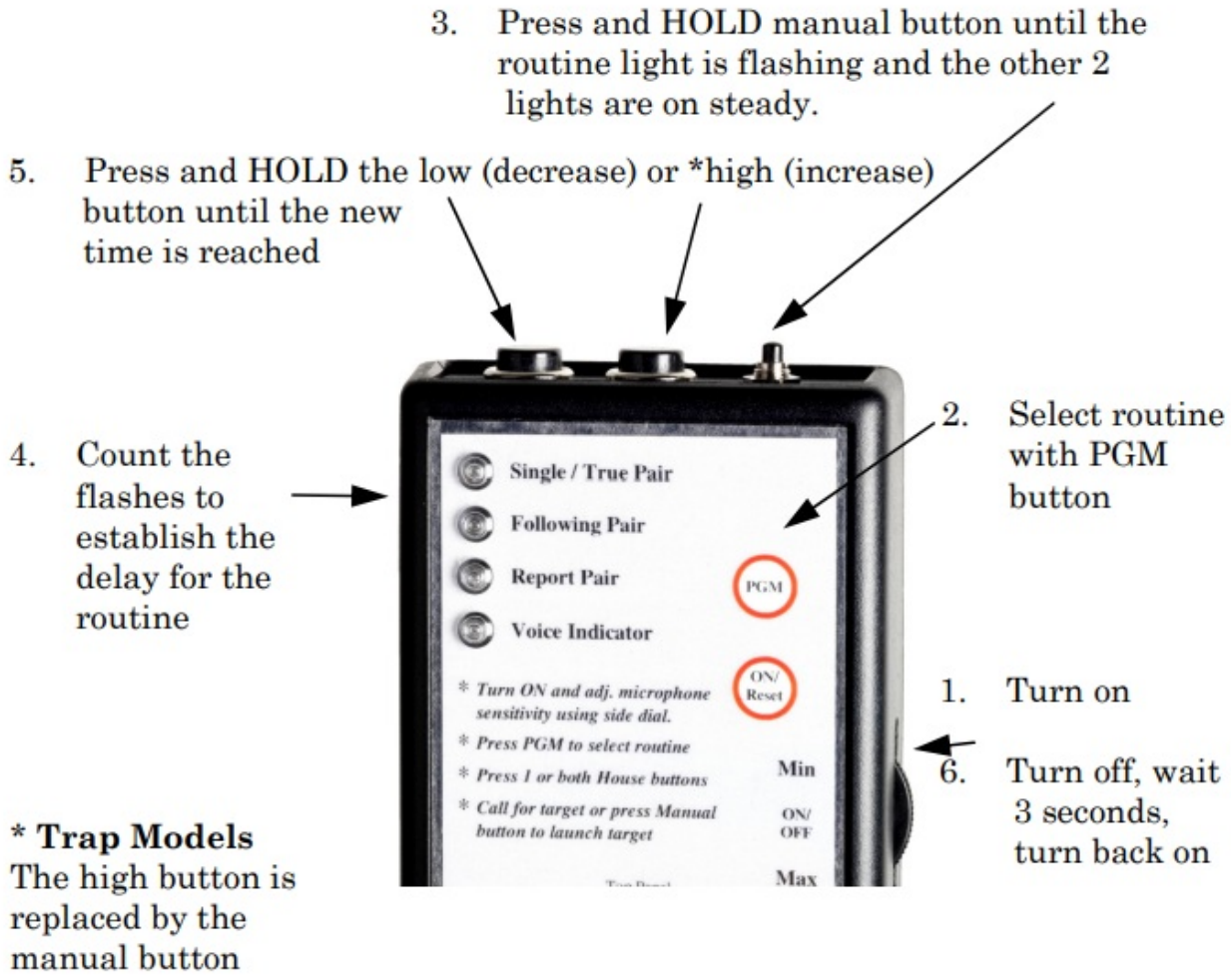
The random target routine constantly scrambles the top arming buttons. Pressing one of the arming buttons will lock that particular house in for the next shot. This will be either a high/left, low/right or double. Once in standby, the Autopuller continues to scramble the buttons again for the next shot. (For Custom models—see supplement manual)

Continue on to pages 9 to 16 for the adjustable routines:

Voice Delay
International Delay
Time Delay
Following Pair
Report Pair
Rearm (For Custom models—see supplement manual)

The following 6 pages contain the information for Voice, International, and Time Delays, Following and Report Pairs and Rearm. These routines come preset with a standard value found to work in most cases. If you find that your unit does not perform the way you would like, read the information contained within the routine you want to modify.

When making the adjustments, you will be using the indicator lights to help you set the new values. The 4 program routines will use the blinking of the routine light to indicate the time set. To enter the programming routine, select the routine (using the PGM button) and hold the manual release button until routine light starts flashing and the remaining 2 routine lights stay lit. Please refer to the specific instructions for each routine.



Voice Delay Routine (Trap/Skeet)

The voice delay routine will place a delay between when you call for the target and when a target is released. Since the Autopuller is very fast on the release, this routine will approximate the same speed as a pullers response. To adjust the delay up or down from the preset 1/2 second delay, refer to voice delay adjustment.

Voice Delay Adjustment

The voice delay is adjustable to allow you to fine tune the amount of time between your call and target launch. To adjust, use the PGM button to select the voice delay routine. Press and hold the manual button (for approximately 4 seconds) until the voice delay light starts to blink and the remaining 2 routine lights stay lit. Release the manual button. Count the blinks between pauses to establish the present time. Each blink is equal to approximately 1/10 of a second. Press and hold the high house button (manual button for Trap models) to increase the count or the low house button (arming button for Trap models) to decrease the count. The range is from 1 to 9. Once you have the count you like, turn the Autopuller off, wait 3 seconds, and turn back on. The new delay will now be stored internally. If you do not turn the Autopuller off, the auto off function will turn the Autopuller off after 10 cycles and store your settings.

International Delay Routine (Trap/Skeet)

The international delay routine will place a delay between when you call for the target and when a target is released. This delay will be random and vary from 0 seconds up to 3 seconds. Each time you call for a target, you will have a different delay. This holds true for both the voice and manual release.

International Delay Adjustment

The international delay is adjustable to allow you to fine tune the maximum time between your call and target launch. To adjust, use the PGM button to select the international delay routine. Press and hold the manual button (for approximately 4 seconds) until the international delay light starts to blink and the remaining 2 routine lights stay lit. Release the manual button. Count the blinks between pauses to establish the present time. Each blink is equal to approximately .3 seconds. Press and hold the high house button (manual button for Trap models) to increase the count or the low house button (arming button for Trap models) to decrease the count. The range is from 1 to 10. Once you have the count you like, turn the Autopuller off, wait 3 seconds, and turn back on. The new delay will now be stored internally. If you do not turn the Autopuller off, the auto off function will turn the Autopuller off after 10 cycles and store your settings.
The time delay routine will allow you to shoot in noisy environments, or if you just don't want to use the microphone. The time delay is from when you press the arming button to when a target is thrown. Keep in mind that if you want to throw doubles, you must press both arming buttons, with the time starting on the 1st button pressed. If the time interval is too short, you may have to increase the time to allow you to press both then prepare your stance.

Time Delay Adjustment

The time delay is adjustable to allow you to fine tune the amount of time between your pressing an arming button and target launch. To adjust, use the PGM button to select
the time delay routine. Press and hold the manual button (for approximately 4 seconds) until the time delay light starts to blink and the remaining 2 routine lights stay lit. Release the manual button. Count the blinks between pauses to establish the present time. Each blink is equal to approximately 1/2 of a second. Press and hold the high house button (manual button for Trap models) to increase the count or the low house button (arming button for Trap models) to decrease the count. The range is from 1 to 9. Once you have the count you like, turn the Autopuller off, wait 3 seconds, and turn back on. The new delay will now be stored internally. If you do not turn the Autopuller off, the auto off function will turn the Autopuller off after 10 cycles and store your settings.

Report Pair (Skeet)

The report pair routine will trigger a second target from the opposite machine that was selected. If you press the high/left arming button, the 1st target will come from
that machine, and at the sound of your gun, the 2nd target will be released from the right machine. The same is true in the reverse. Pressing both arming buttons will
trigger a double and cancel the report pair sequence for that shot. A delay is inserted between the 1st shot and the 2nd launch. This will give you time to set up for the
shot. The preset hold time is 1/2 second. If you want more or less time, continue on with report pair adjustment. Refer to microphone setup (page 18) if you are having difficulties with the 2nd target.
Note: If the skeet model is used with a single trap machine, it will essentially become a following par.

Report Pair Adjustment

The report pair is adjustable to allow you to fine tune the amount of time between your shot and the 2nd target launch. To adjust, use the PGM button to select the report pair routine. Press and hold the manual button (for approximately 4 seconds) until the report pair light starts to blink and the remaining 2 routine lights stay lit. Count the blinks between pauses to establish the present time. Each blink is equal to approximately 1/10 of a second. Press and hold the high house button (manual button for Trap models) to increase the count or the low house button (arming button for Trap models) to decrease the count. The range is from 1 to 9. Once you have the count you like, turn the Autopuller off, wait 3 seconds, and turn back on. The new delay will now be stored internally. If you do not turn the Autopuller off, the auto off function will turn the Autopuller off after 10 cycles and store your settings.

Following Pair Routine (Skeet/Trap)

The following pair routine will trigger a second target, from the same machine, after the first is launched. Since this target will be from the same machine, a delay needs to be inserted between the 2 targets. A delay of 2 seconds is the preset time between targets. If you shot the first target in less than the 2 second rearm time, the Autopuller will hold the second target for the duration of the 2 second interval. If your first shot is after the 2 second rearm time, the second target is immediately released. Pressing both arming buttons will trigger a double and cancel the following pair sequence for that shot. To adjust the delay up or down from the preset 2 seconds, refer to following pair adjustment.
Refer to microphone setup (page 18) if you are having difficulties with the second target.

Following Pair Adjustment

The following pair is adjustable to allow you to fine tune the amount of time between your 1st target and second target launch. To adjust, use the PGM button to select the following pair routine. Press and hold the manual button (for approximately 4 seconds) until the following pair light starts to blink and the remaining 2 routine lights stay lit. Count the blinks between pauses to establish the present time. Each blink is equal to approximately 1/2 of a second. Press and hold the high house button (manual button for Trap models) to increase the count or the low house button (arming button for Trap models) to decrease the count. The range is from 1 to 9. Once you have the count you like, turn the Autopuller off, wait 3 seconds, and turn back on. The new delay will now be stored internally. If you do not turn the Autopuller off, the auto off function will turn the Autopuller off after 10 cycles and store your settings.

Rearm (Trap) (For Custom model– see supplement)

The rearm routine will allow you to call for your targets without re-pressing the arming button for each call. Keep in mind that once rearmed, the voice circuit will be active
and waiting for a command to launch a target. It may be necessary to adjust the sensitivity down to minimize the amount of false targets.

NOTE: When this routine is installed in a Skeet model, only the LOW house will rearm.

Rearm Delay Adjustment

The rearm delay is preset to approximately 4 seconds. This allows you the time for your shot without a second target being launched by the sound of your gun. To change the
delay, press the PGM button until the indicator is blinking next to the rearm light. Press and hold the manual button (for approximately 4 seconds) until the rearm light starts to blink and the remaining 2 routine lights stay lit. Count the blinks to establish the present delay. To increase the delay, press and hold the manual (high) button until the new time is reached. To decrease the delay, press and hold the arming (low) button until the new delay is reached. The range is from 1 to 9. Once you have the count you like, turn the Autopuller off, wait 3 seconds, and turn back on. The new delay will now be stored internally. If you do not turn the Autopuller off, the auto off function will turn the Autopuller off after 10 cycles and store your settings.

Auto-Off Routine – Delay Adjustment mode

The off routine will power the APD off after 6 seconds. During this time, all 3 routine lights will blink. If you do not press the PGM button and advance to the 1st routine
within this time, it will be necessary to press the ON/Reset button to turn back on.
If you find that the side rotary switch is being turned on when stored, try using this routine along with turning the

side switch off. You now have less of a chance of draining the battery by mistake.

Auto Off Function – Controller

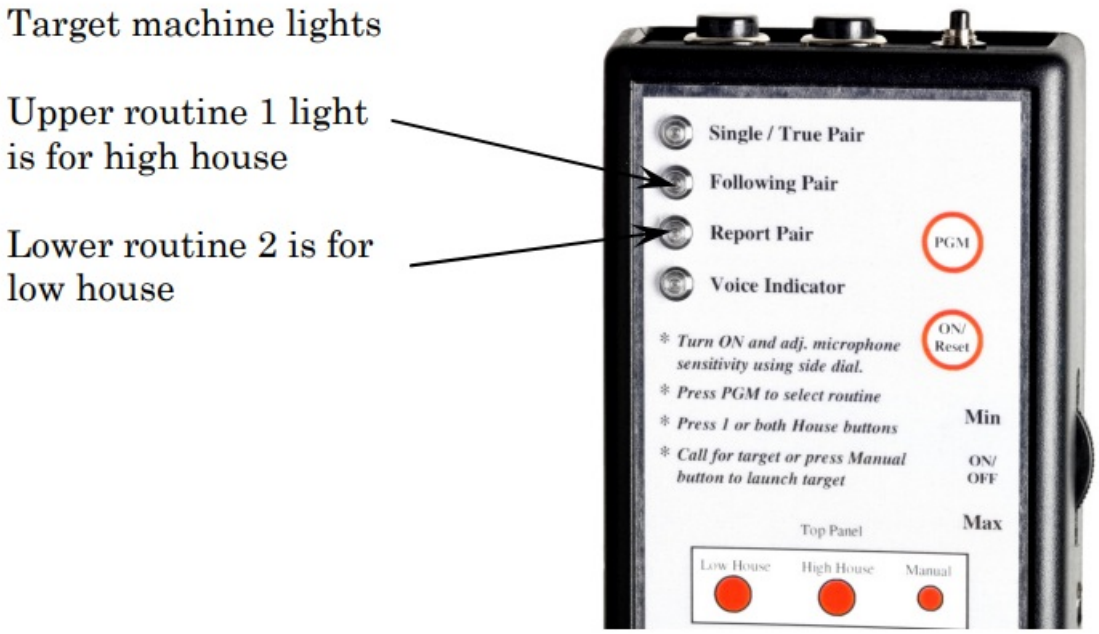
To increase battery life, an auto off feature is included in your unit. If your unit stays in the standby mode for more than 30 minutes, the auto off function starts blinking all 3
routine lights and turns off all power 6 seconds later. To restore power, you must press the Reset/ON button on the front panel.
(Refer to page 21 For the receiver auto-off function.)

Indicator Lights

The indicator lights have 3 modes of operation. The fast flashing mode is standby. (This helps increase battery life.) The steady mode is the armed state. A target will be released on command. The slow flashing mode of 1 light with the other 2 steady is the program mode. Refer to the particular routine for further information.

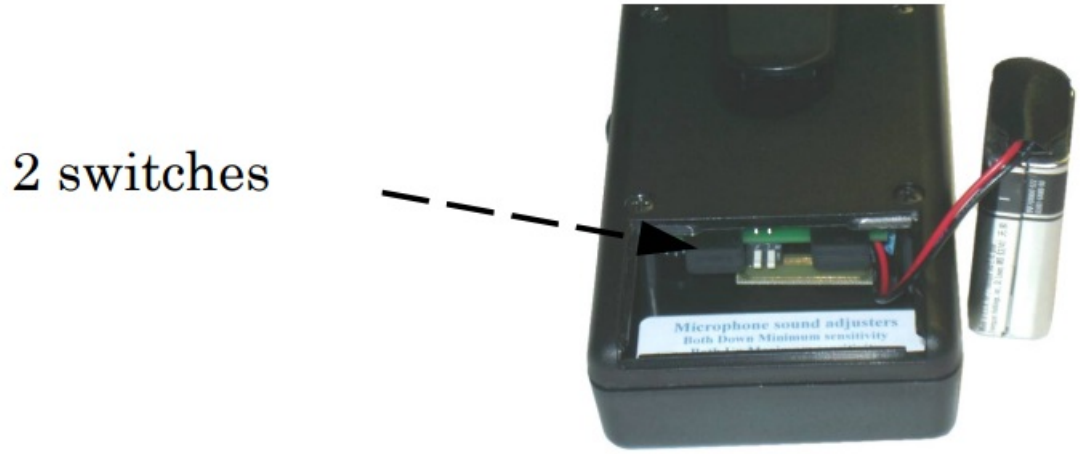
Indicator Lights as Target Lights

As a troubleshooting and setup aid, the 2 routine lights are also indicators for the target machine signal. It is best to be in the Single/Double routine when checking the machine signal. Pressing the high or low house button will cause the Single/Double light to stay on steady. The signal can be “viewed” by pressing the manual button and observing the length of time the routine light stays on. The upper routine light indicates a high target is released while the lower routine light indicates a low target.



Microphone Setup

The microphone is preset to work in most situations. If you find that the external adjuster does not allow you to comfortably call for your target, you may adjust the sensitivity further by accessing the internal set of 2 switches.
The internal switch is located in the battery compartment. Open the battery door and remove the battery. The switch is now visible in the center of the unit. As seen through the opening, down is off and up is on.
The normal settings are for one switch to be on and one switch to be off. Turning switches 1+2 off will decrease the sensitivity of the microphone. You will now need a louder and longer call before the unit will respond. Turning switches 1+2 on will increase the sensitivity of the microphone. Keep in mind that the increased sensitivity will now release a target very easily, possibly even with the closing of your gun.

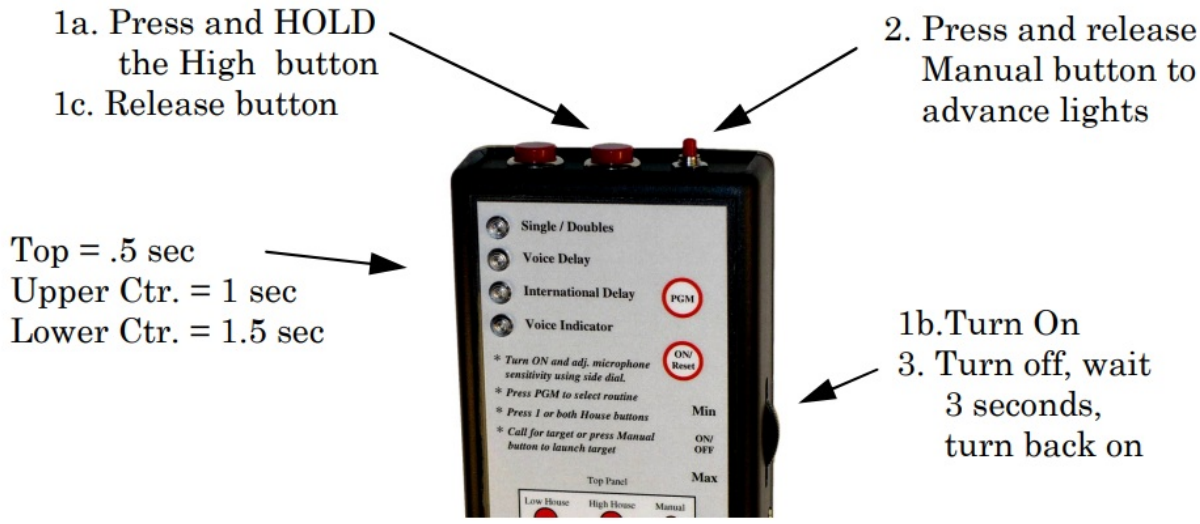


Transmitter Signal Setup

The transmitter signal is set to work in most environments. If you are having difficulties in releasing a target, adjust the signal length.

Adjustment

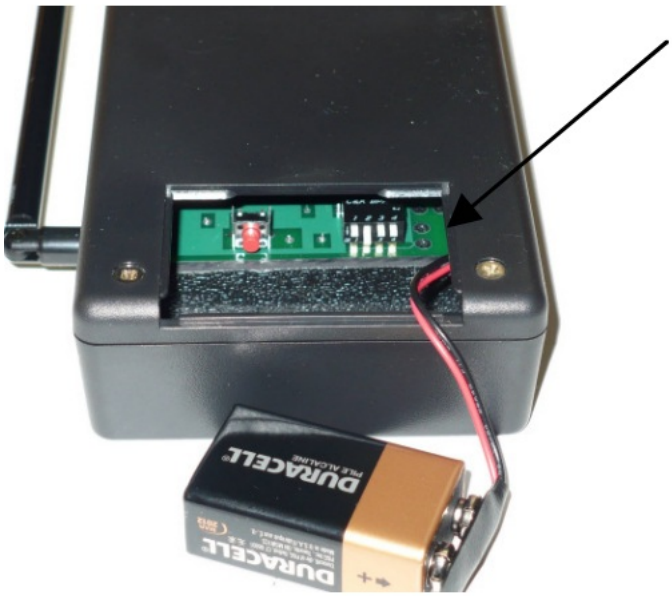
1a. While holding the High button,
1b. Turn the Autopuller on.
1c. Release the High button.
Two lights will be off and One will be blinking fast.
2. Press and release the Manual button until the light corresponding to the signal you desire is blinking.
Top light blinking fast – .5 second signal
Upper Ctr. light blinking fast – 1 second signal
Lower Ctr. light blinking fast – 1.5 second signal
3. When you have selected the light you want, turn the Autopuller off.
The next time you turn on, the new signal length will be used.
NOTE: If a longer signal is set, the delays in rearm, following pair and report pair may be affected.



Machine Pulse Setup (in Receiver)

The machine pulse is set to work on most machines. If you are having difficulties in releasing a target, adjust the pulse length using the internal switch.
The internal switch is located in the battery compartment. Open the battery door and remove the battery. The switch is now visible on the right of the unit. As seen through the opening, down is on and up is off. Please reference the picture below and note switches 1, 3 and 4 are off and switch 2 is on. The numbers go from left to right, 1 to 4.

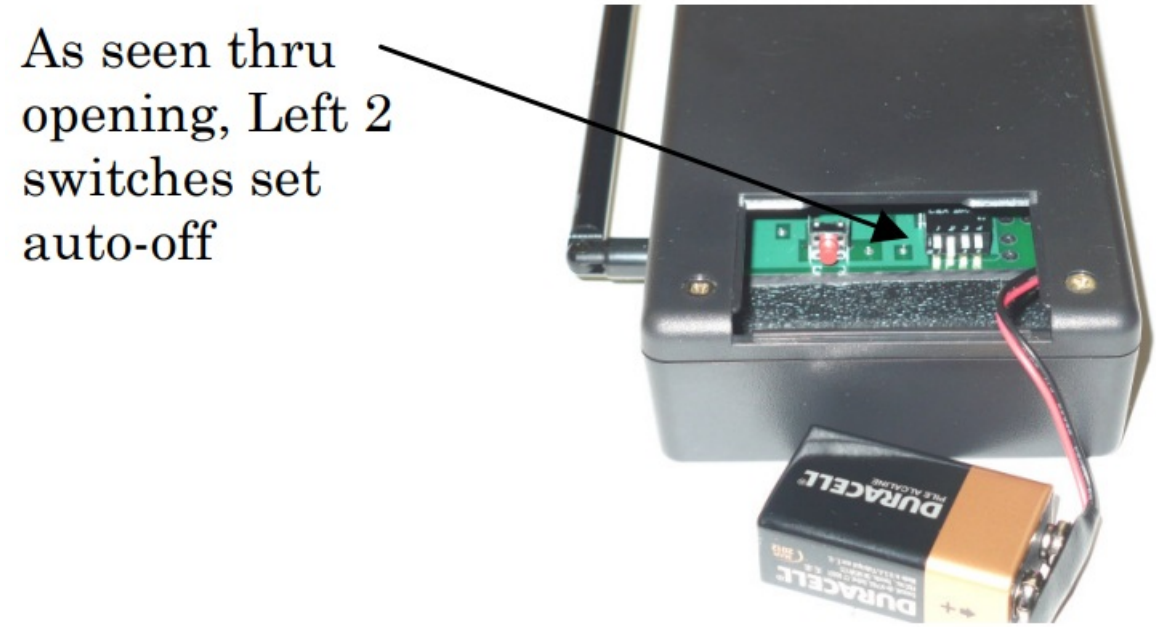
The 4 switches have two functions. Switches 3 and 4 are for machine pulse and switches 1 and 2 are for for machine pulse and switches 1 and 2 are for auto-off state.
Switches 3 and 4 are used to increase the length of the pulse needed for the target machine to launch a target. A foot-operated machine or older machine may need a longer pulse. With both switches 3 and 4 , the pulse to the machine will be .5 seconds. Placing switch 3 on, adds .5 seconds, for a total of 1 second pulse. Placing switch 4 on will add 1 second, for a total of 1.5 seconds. Placing both switches 3 and 4 on will give a pulse of 2 seconds.
NOTE: If after making an adjustment the pulse is too long, a second target may be released. To correct this, place switch 1 back in the off position.



As seen thru opening, Right 2 switches set machine signal

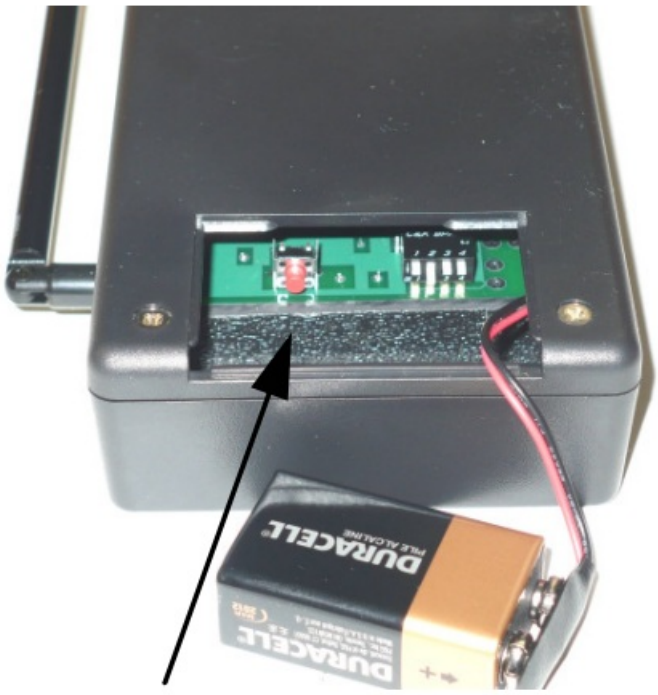
Auto-Off Setup (in Receiver)

The receiver can be set to stay on until turned off, or turn off after a preset time.
The internal switch is located in the receiver battery compartment. Open the battery door and remove the battery. The switch is now visible on the right of the unit. As seen through the opening, down is on and up is off. Please reference the picture below and note switches 1, 3 and 4 are off and switch 2 is on. The numbers go from left to right, 1 to 4.
The 4 switches have two functions. Switches 1 and 2 are for auto-off and switches 3 and 4 are for machine pulse. Switches 1 and 2 are used to set the power off state. With both switches off, the receiver will stay on until manually turned off by pressing the OFF indication on the front panel. Turning switch 1 on will set the off time to 30 minutes after the last target is released. Turning switch 2 on will set the time to 60 minutes. Turning both 1 and 2 on will now set the turn off time to 1.5 hours. Each time you launch a target, the time is reset to 0.
NOTE: Photo shows auto-off set to 60 minutes.



Synchronizing the Controller to the Receiver

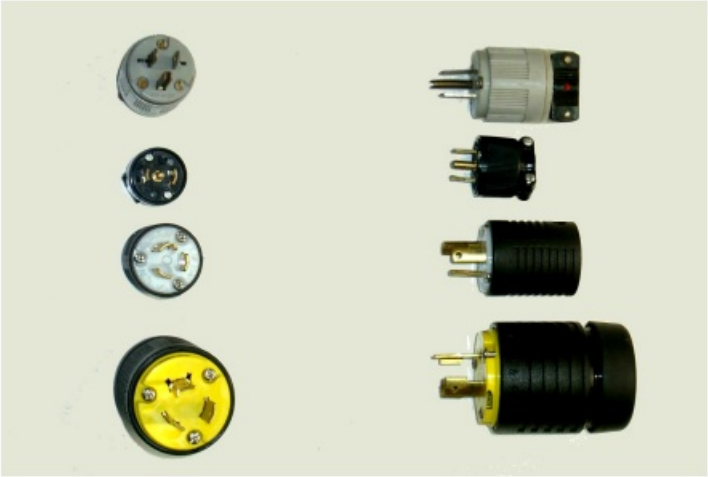
Located inside the receiver battery compartment is the red pushbutton used to place the receiver in a learn mode. This may be necessary if you want to use more than 1 controller with the receiver.
To add a new unit, turn the receiver on, and wait until the power light starts to flash. Try the new controller. If the controller does not connect with the receiver, press and release the pushbutton inside the battery compartment. The data light will now start to flash. Turn the Autopuller on, and press one house button, then the manual button. Press the pushbutton in the receiver again. The data light will stop blinking.
Press the low house button and then the manual button. The receiver should indicate that a low target has been launched. Do the same for the high house. The 2 units are now communicating with each other. Repeat the process for as many units as you have.
If you decide to remove a transmitter, due to interference from adjoining field usage, press and hold the button until the data light goes off (approx 10 sec.). After you release the button the light will come on again for 2 seconds, then go off. This has cleared ALL transmitters. You will have to press the button again and follow the procedure to add a controller to reinitialize your unit.

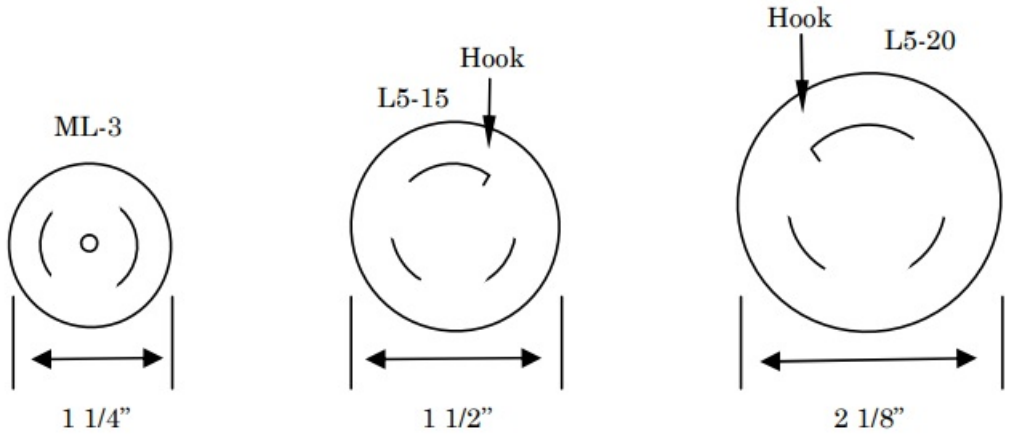


Push button for synchronizing both units

Wiring information

The normal electrical color code does not apply to the Autopuller hookup. Due to the limitations on types of wire available, the colors are only references as to how you need to attach the connector.
Green: is common to both the high and low machines
White: is to be connected to the low machine
Black: is to be connected to the high machine
For your reference, 3 of the common size connectors are shown below. (The standard 110v is shown to assist you in establishing sizes.)

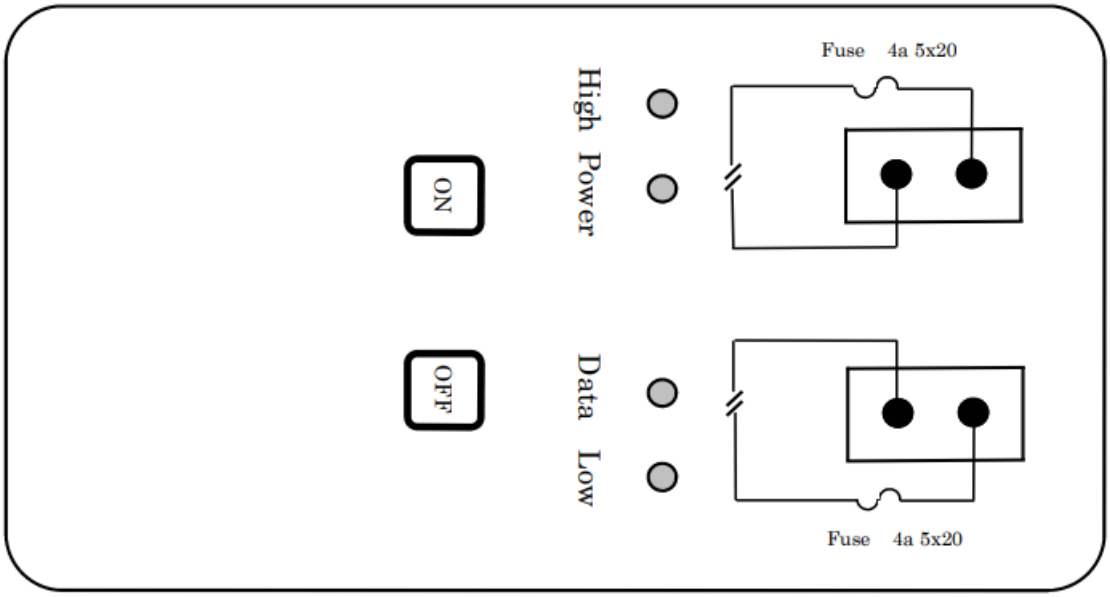


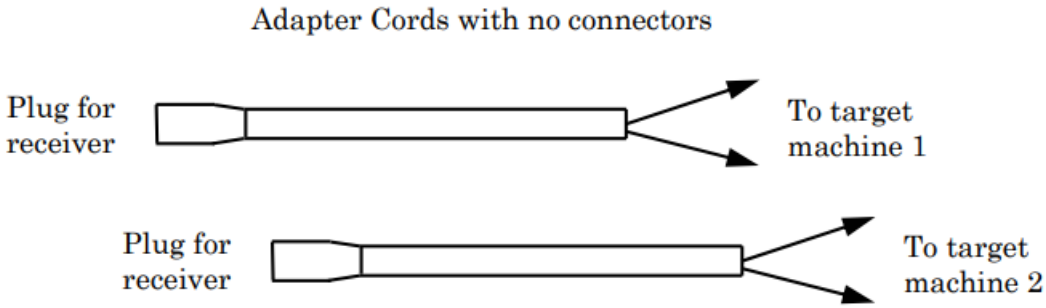


As seen when looking at the outside terminals
Dimensions are approximate and may vary based on manufacturer

Wiring the Adapter Cord Dual outlets

(Refer to page 25 for single outlet receiver)
The wiring for the receiver with two outlets is very easy. You will be using a separate adapter cord for each machine, so it does not matter which wire goes to which terminal. For each machine, you simply connect the two wires of the adapter cord in place of the pull cord.
Receiver



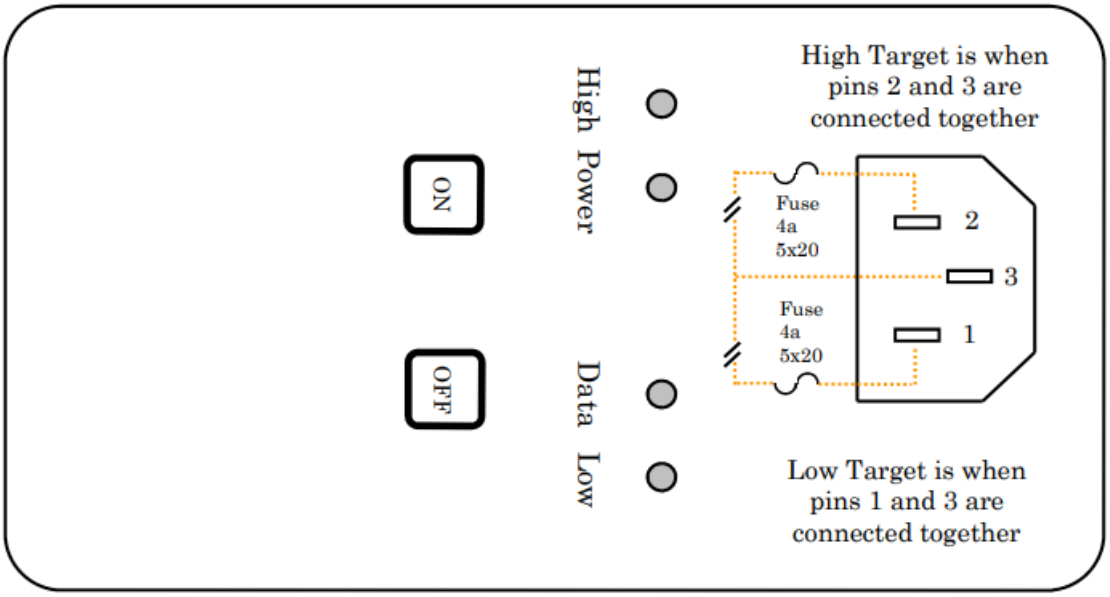


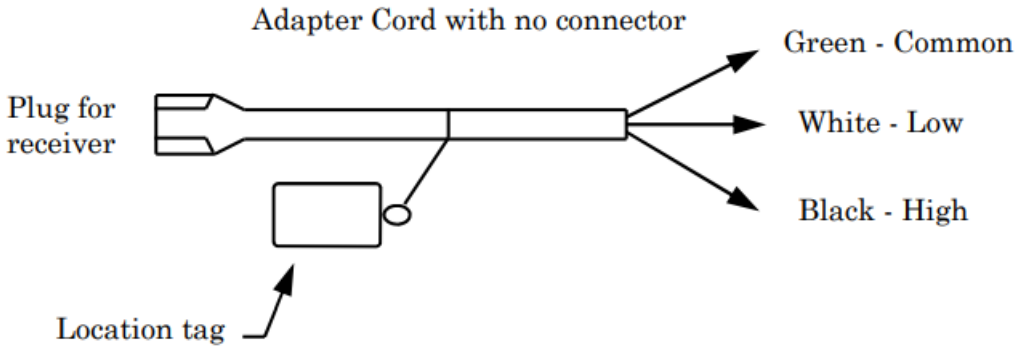
Wiring Setup Single Outlet

The Autopuller receiver is connected to your course in place of the original pull cord. Since the adapter cord has three wires, the wires have to connected in a specific order.
Please read the following pages to assist you. Your system comes with two adapter cords, allowing you to wire one for skeet and one for trap.

Installation:

Trap cord: Most shooters connect both the high (black) and the low (white) wires to the same terminal, with the green connected to 2nd terminal. This allows you to press either button if you are using a Skeet controller.
Skeet cord: The three wires have to be connected in a specific way. To operate two target machines, one wire has to be common to both (green), one wire is for high (black)
and one wire is for low (white). You will need to determine the matching wires for your particular cord. If you connect the wiring incorrectly, the Autopuller will not release the correct target with the appropriate button. If this occurs, simply rearrange the wires as per the information below.
Machines work properly but the wrong machine triggers:
black and white wires reversed in connector
High and Both work but no Low:
black and green wires reversed in connector
Low and Both work but no High:
white and green wires reversed in connector
Wiring the Adapter Cord Single outlet
Receiver





When wiring for a Trap machine, connect both the high and low wires to one terminal and the common wire to the other.
Use the location tag to note the machine and at which club or location the cord is wired for. This will prevent any confusion in the future if multiple cords are carried in your case.

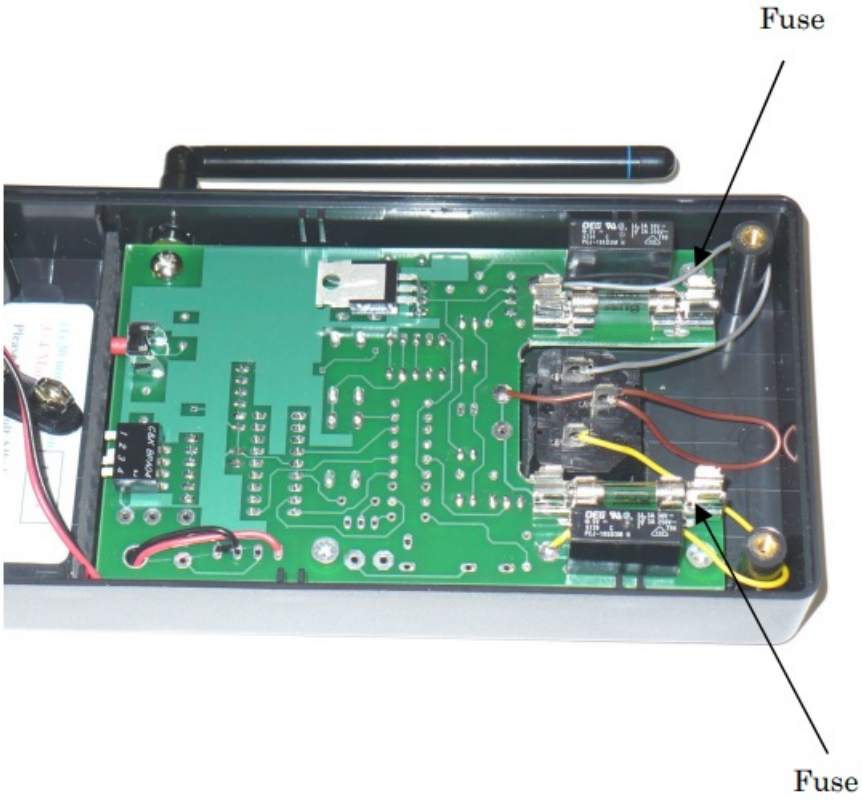
Using your Single Outlet Receiver on a Trap field

If you plan on using your Autopuller on a TRAP field, please read the following:
Before plugging your Autopuller into the Trap connector, verify that the wiring is compatible. There are several ways to trigger a target launch. The most common is to apply power to the hand-held button. Pressing the button will supply the launch relay with power.
If you connect your Autopuller to a 3-wire trap cord, and 1 of the wires is connected to ground, you will damage either the Autopuller circuit board or the machine circuit board.
To prevent a circuit board failure, verify how your trap machine is wired. If the existing trap connector has only 2 wires, check to see if they line up with the green and black wires on the Autopuller. If the trap connector has 3 wires, use a meter to establish if one is ground, which one is power (12v, 24v or 110v) and which one will launch a target.
If the trap connector has a ground wire or the wiring does not line up properly, do not plug the Autopuller in! There is a possibility that when you press one of the arming buttons, you may damage either the Autopuller circuit board or the machine circuit board. Resolve the wiring conflict by rewiring the trap connector.
The receiver has two 4a fuses located on the sides of the box. If you have the wiring incorrect, one or both of the fuses may blow, protecting your equipment. If this happens, correct the problem before replacing the fuses.

Replacing Fuses

The receiver has two internal fuses. These are designed to protect both your target machines and the receiver. The fuse holder is designed to hold one 4 amp fuse. You may use either a 5x20mm or ¼x1¼fuse. To replace,

simply remove the back cover, remove the blown fuse, and replace.



Troubleshooting Procedure

If you understand what works, it should be very easy to find your problem. Please do a quick evaluation of what you have, before spending a lot of time changing things.
Identify the first step that does not work and proceed to that step on the following pages.

GO TO:	IF:
Step A	Controller does not turn on?
Step B	Receiver does not turn on?
Step C	Controller does not operate properly?
Step D	Receiver does not respond to controller?

If you completed the above 4 steps and all appears to be working properly, continue to the step that corresponds to the area you are having the problem in.

GO TO:	IF:
Step E	APC/D seems to work ok but no target launch
Step F	Erratic operation, false target launch
Step G	Erratic operation, missing targets
Step H	Wrong target launched
Step I	No target launch at a different machine or club
Step J	Foot-operated released machines
Step K	Following Pair does not work properly
Step L	Manual Button Operation

Step A: Can't Turn Controller On
(On state is the Top light blinking)

- Be sure side rotary switch is on.
- Press firmly on the ON/RESET circle on front panel.
- Check for dead 9-volt battery.

Step B: Can't Turn Receiver On
(On state is the power indicator light blinking)

- Press firmly on the ON button on front panel. Power light should illuminate, then start to blink.
- Check for dead 9-volt battery.

Step C: Controller Operation

- Press one of the arming buttons. The top (Single/ Double) light will stop blinking.
- Press the manual button. The corresponding target light turns on.
- Top (Single/Double) light goes back to the blinking state.
- Plug the microphone into the side jack. The voice indicator turns on when you talk into the microphone. If not, refer to page 18, microphone setup.
- Press 1 of the arming buttons again.
- Call for a target.
- The voice indicator will illuminate and the corresponding target light will indicate a target launch.
- Press the PGM circle to advance to the next routine.
- Verify the routine operates as stated.
- Press the PGM circle again.
- Verify the 2nd routine operates properly.
- Press the PGM circle again.
- Verify all 3 light are blinking and unit turns off.
- Press the ON/RESET circle to turn Controller on.

- If the controller does not follow the correct sequence, there could be a power problem. Install a new 9-volt Alkaline battery and using the side switch, turn the controller on and off several times. If this does not correct the problem, contact Clay Delay for assistance. There could be a switch or circuit board problem.

Step D: Receiver Operation

Turn the receiver on by pressing the ON button on the front panel. The power light will illuminate for 2 seconds then start to blink.
With the controller on and armed, press the manual button.

- The data light will illuminate for the length of time the controller light is on. The corresponding target light will blink on then off.
- If the receiver does not respond to the controller refer to page 22.
- If the receiver responds properly, your system is operating the way it was designed to. Continue to the step that best matches your problem.
- If the receiver does not respond to the controller, or is not consistently indicating a signal, try a fresh 9-volt Alkaline battery. If this does not correct the problem, contact Clay Delay for assistance. There could be a switch or circuit board problem.

Step E: System seems to work ok but no target launch

- Be sure target machine and receiver are on. If the receiver has prematurely turned itself off, refer to page 21.
- Check that the adapter cord is connected properly and securely to the machine connector and receiver.
- Verify the data and target lights on receiver are operating properly.
- Check that the both 4-amp 5×20 fuses are good.
- If there is still a problem, contact Clay Delay for assistance.

Step F: Erratic operation, false targets

- Lower the sensitivity of the microphone using either the external adjuster or switches inside of battery compartment. See page 18 for setup.
- Turn both units off, count to 5, turn units back on. See if the problem is corrected.
- The next check is to unplug the microphone. Launch several targets using the manual button. If the problem is gone, plug the microphone back into the side jack. While watching the front voice indicator light, pull and twist the microphone cord and connector. If the voice indicator starts to blink or stays on, there is a problem in the microphone. If possible, try a different microphone and see if the problem is resolved. Contact Clay Delay for a replacement microphone.
- Possibly a bad battery, replace with a 9-volt Alkaline battery.
- If there is still a problem, contact Clay Delay for assistance.

Step G: Erratic Operation, missed targets

- The first check is to verify you are not out of range. The normal maximum distance from controller to receiver is 175 feet.

- The placement of the controller on your person will have an impact on the range. Try moving your unit to a different orientation on your belt, shell pouch, jacket, etc.
- The receiver may be picking up interference from a surrounding structure or environment. Try moving the receiver to a different location and/or adjust the antenna orientation to the shooting field.
- Increase the machine pulse length. Refer to page 20.
- Possibly a bad battery, replace with a 9-volt Alkaline battery.
- Extend the cord on the receiver to reposition it closer to the middle of the skeet field.

Step H: Wrong House Triggers
The most common problem is that the wiring in the machine connector is not properly configured. Identify the situation and change the wiring.

- Machines work properly but the wrong machine triggers:
  black and white wires reversed in connector
- High and Doubles work but no Low:
  black and green wires reversed in connector
- Low and Doubles work but no High:
  white and green wires reversed in connector

Step I: APD works ok at original club but not at a 2nd club or at a different machine

- Verify that the connector wiring is the same on both machines.
- The second machine may need a longer signal. Refer to page 20 for adjusting the machine pulse.

Step J: Foot-operated release machines

The signal to a foot-operated machine needs to be longer than a pushbutton controlled machine. If you Use the side adjuster to set the sensitivity of the experience a problem releasing targets, increase the machine pulse by opening the battery compartment in the receiver and turning switch 1 and/or switch 2 on. Refer to page 20, machine pulse setup for further instructions.

Step K: Following Pair does not work properly
When using one machine, a pause has to be placed between the two shots. This will allow the machine to properly recycle. If the pause is too short, you may have a problem with consistent launches. Adjust the delay as per following pair adjustment procedure on page 14.
The second problem may be the microphone sensitivity. Refer to page 18 for setup.

Step L: Manual Button Operation
The manual button allows you to pull a target for a companion shooter. Since you will be pressing the button, the voice delay and time delay functions are disabled with the button. This allows for a normal response to the call. In the international delay mode, the same random delay will be inserted between when you press the button to target launch.
When in the report pair or following pair modes, the second target will not release with the manual button since the APD is waiting for the sound of the first shot. You must
have the microphone connected for these modes.

Record of switch settings: (default)
Voice Delay Setting _(5)_____
International Delay_(9)_____
Time Delay Setting _(5)_____
Following Pair Setting _(5)_____
Report Pair Setting _(5)_____

Continuous Rearming Setting _(4)_____
Controller Voice Switches _____
Club _____
Connector _____
Receiver Switches 3 and 4 _____
Club _____
Connector _____
Receiver Switches 3 and 4 _____
Club _____
Connector _____
Receiver Switches 3 and 4 _____

FEDERAL COMMUNICATIONS COMMISSION (FCC)
REGULATORY INFORMATION

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.
- Consult the dealer or an experienced radio/TV technician for help.

CAUTION
The wireless radios are required to comply with FCC rules and regulations. Consequently, the radios have limited range because of the limited output power under these rules. Changes cannot be made to these devices because such changes may void compliance with U.S. rules and regulations.

WARNING
Safety comes first!
Before turning the Autopuller on, always insure there are no individuals working on or near the target machine the Autopuller is connected to. Always adhere to the club rules regarding the safe operating procedure for releasing targets.
Many individuals have elected to connect a common household 110-volt style male connector to the cord on the Autopuller. If the Autopuller is inadvertently plugged into an outlet, turned on, and operated, major damage will occur.
DO NOT, UNDER ANY CIRCUMSTANCE, PLUG THE AUTOPULLER INTO ANY OTHER CONNECTION THAN THE TARGET MACHINE PULL CORD RELEASE CONNECTOR!
If your Autopuller may possibly be used by other individuals, Clay Delay Inc. advises that you spend a little more for a dedicated twist lock connector. This will insure that a possible problem with a wall outlet cannot occur.

Disclaimer:
Your safety should always come first. The Autopuller was designed to give accurate, consistent pulls without the need for a trap boy; however you should never practice alone. lay Delay Inc. is in no way responsibility for personal injury, damage or loss caused by an Autopuller unit. This product should never be used for purposes other than that for which it was designed by Clay Delay Inc.
Warranty:
This product is covered by a 1-year warranty against manufacturing defects and premature component failure.
Our goal at Clay Delay Inc. is 100% customer satisfaction. If, for any reason, you are not satisfied with our product or have concerns, please contact us at (716) 674-4489.

CLAY DELAY INCORPORATED
115 Roycroft Dr. West Seneca NY 14224
Phone 716-674-4489
E-mail: autopullers@claydelay.com
www.claydelay.com

Documents / Resources

	CLAY DELAY APC Wireless Autopuller [pdf] Owner's Manual APD, APC, APC Wireless Autopuller, Wireless Autopuller, Autopuller

References

- Clay Delay