

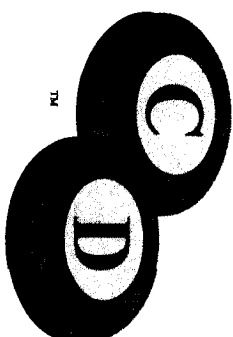
Thank you for ordering a Clay Delay

Safety should always come first. The Clay Delay System was designed to give consistent pulls without the need for a trap boy. You should never be alone when practicing, but with The Clay Delay System, you do not have to rely on your companion to do the pulling.

CLAY DELAY takes no responsibility for damage caused by incorrectly wired trap machines, modified trap machines, modified Clay Delay units, incorrect data given to Clay Delay at time of order, or use of the Clay Delay for purposes other than that for which it was designed.

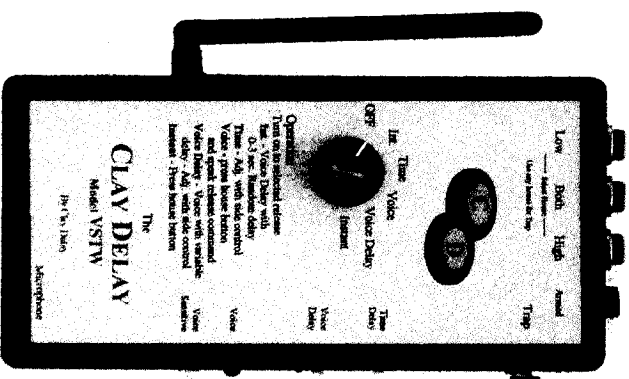
This product is covered by a 1-year warranty against manufacturing defects.

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



The Clay Delay

Owner's Manual



Contents

Parts of the Clay Delay Package.....	2
The System , Before you Start.....	3
Components Control Box.....	4
Components Microphone, Adapter Cord.....	6
Components Receiver.....	7
Installation.....	8
Microphone.....	9
Wiring of the Adapter Cord.....	10
Your information on target machine(s).....	11
Initial Adjustments.....	12
Pulse Length Adjustment.....	13
Setting Codes.....	14
Antenna Alignment.....	15
Optional Microphone Clip.....	16
Blank.....	17
Common Problems.....	18
FCC.....	22
Notes.....	23

Parts of the Clay Delay Package

1	Control Box
2	Microphones
1	Receiver
1	Adapter Cord
2	9-volt Batteries
1	Carrying Case

The System

The Clay Delay VSTW is designed to be your personal puller, giving the control to you. Using the Clay Delay is simple. Connect the system in place of the existing pull cord, select the release mode, press a house button, and shoot.

Even though you no longer need a trap boy, you still need a companion for safety. Your safety comes first! The difference is that this person does not have to take an active part in your practicing.

Before You Start

The Clay Delay system replaces your existing pull cord. The normal installation would be as follows:

- 1 Identify the type of connector your target machine uses.
- 2 Install your connector on the Adapter Cord as per page 10.
- 3 Install the Clay Delay as per page 9.
- 4 Perform Initial Adjustments as per page 13.
5. Start shooting!

Once the unit is set up for a location, future use is just plugging in and shooting.

• The Control Box

The control box is a molded plastic box which contains the electronics to delay the release of the target. When clipped to your belt or shell holster, the top buttons arm the voice function or trigger a release in the instant or time modes.

The yellow light on the top of the box is a visual that the controller is either delaying the target (equal to the setting of the time delay adjustment) or is waiting for a verbal pull command. This light will only be on in the armed state. The length of the armed state is 30 seconds. In any of the voice modes, if no verbal command is given within 30 seconds after pressing a house button, the Clay Delay will cancel the command and not respond to your voice until the house button is pressed again.

The Selector Knob on the front panel is used to turn the unit on and off and set the mode.

International mode- This mode adds a 0-3 second delay to the voice delay release.

Time mode- This is a time function which does not use the voice circuitry. The upper adjustment (located on the side) is used to set the delay between when the house button is pressed and when the target is released.

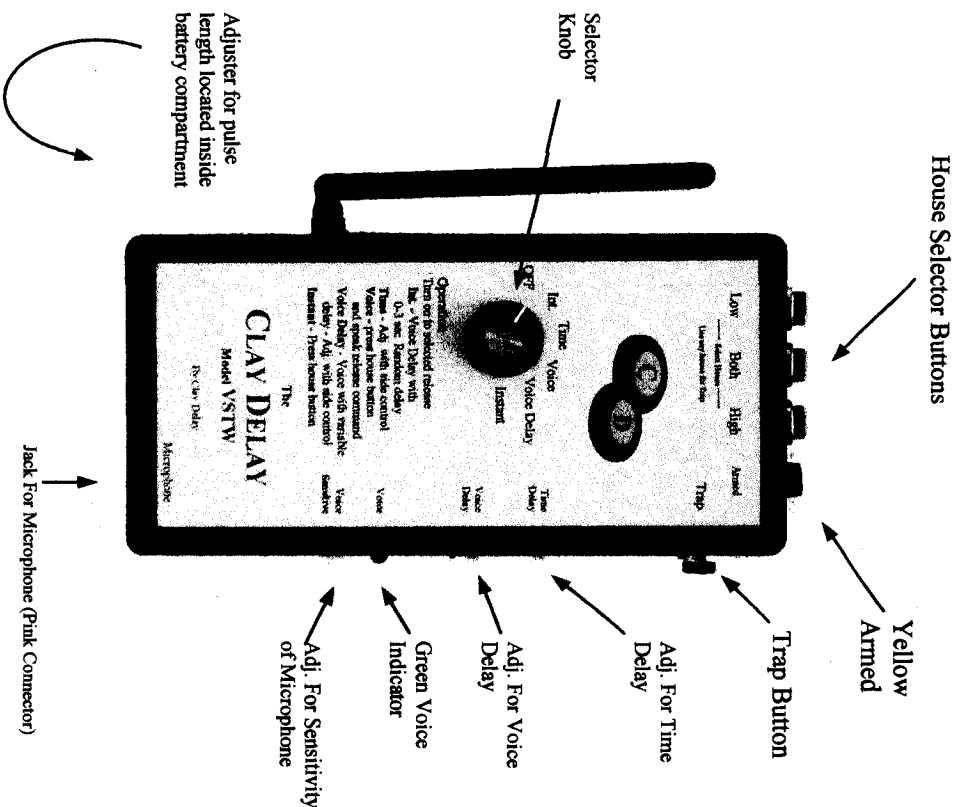
Voice mode- This is the fastest release mode. The house button sets which target will be released when the command is spoken.

Voice Delay mode- This mode equates to the "normal pull". The same process happens as in the voice mode except that the target release is delayed by the setting of the center adjustment (located on the side panel). This allows you to simulate a normal pull involving a pause of between 0 and 2 seconds between the voice command and the target.

Instant mode- This mode is the same as the original pull cable. A target is released when the house button is pressed.

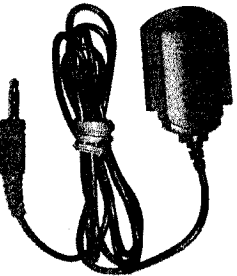
The side panel contains the trap release button and the adjustors for the time and voice settings. Refer to page 13 for how to use the controls.

The microphone jack is located on the bottom of the box.



- Microphone

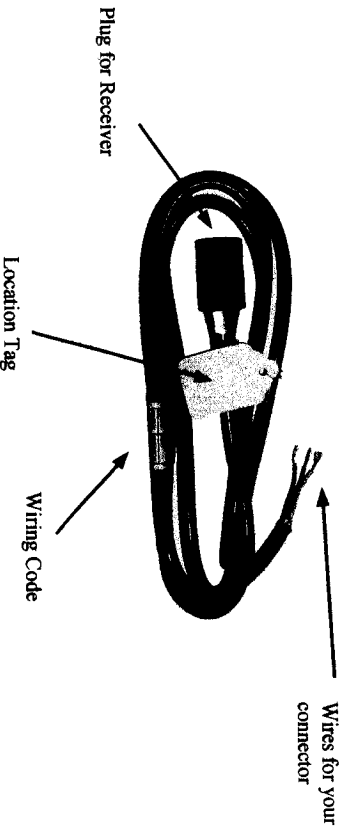
The microphone used for the Clay Delay is a standard microphone used for a computer. Using this style mic. helps in keeping the costs down and is readily available if a problem occurs with the supplied units. Since this component has potential for damage, a 2nd mic. is included as a backup with each system.



- Adapter Cord

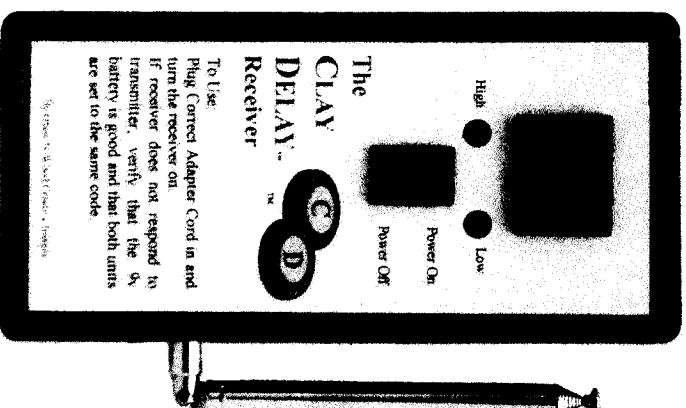
The Adapter Cord is the interface between the Clay Delay and the target machine. The wiring of the Adapter Cord determines how the target machine will operate. The identifier band of the Adapter Cord allows you to properly wire your machine connector.

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



- Receiver

The Receiver decodes the transmission from the Control Box and triggers the target machine.



INSTALLATION



Item A



Item B



Item C



Item D

1. Unpack 4 pieces.

Adapter Cord	Item A
Receiver	Item B
Control Box	Item C
Microphone	Item D

2. Assure you have a correctly wired Adapter Cord (Item A) for the target machine you will be using. (See page 10)

3. Plug Adapter Cord (Item A) into Receiver (Item B) and into the existing release cord outlet on the target machine. [The Clay Delay Adapter Cord replaces the existing pull cord.]

4. Plug microphone (Item D) into jack for microphone on the bottom of the Control Box (Item C).

NOTE: If the Initial Adjustments (Page 13) have not been previously performed, please do it now!

5. Turn selector knob on front panel to the type of release you desire.

6. Clip the Microphone and the Control Box to convenient locations on your person.

7. Press appropriate house button.
- wait for target release
- or call for target release

8. Shoot

MICROPHONE

A Note about the Voice Function

The voice circuit has been designed to respond to a "normal" call to a target. If your call is too short in length, the circuit will not respond. This is to prevent a false target when you close your gun or make similar sound. You may have to change your pull command to accommodate the voice detector. Since the detector is listening for sound loud enough and long enough to trigger the circuit, any word could be used.

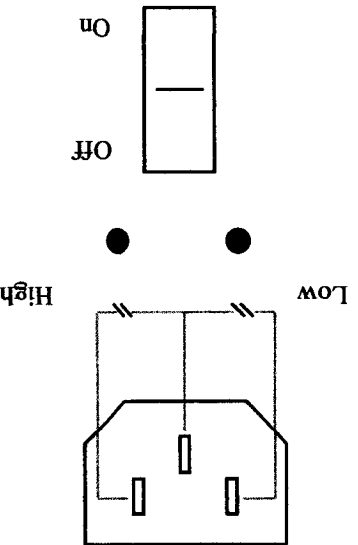
Example:

A short "PULL" command may not work since the normal emphasis is on the "P" sound with the "ULL" tapering off.

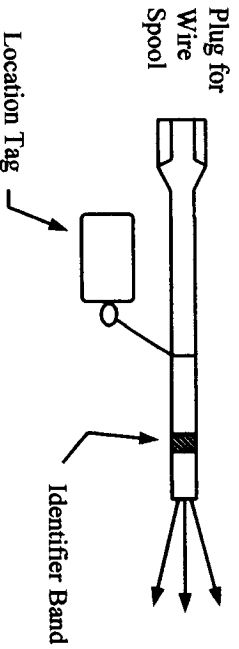
You may try using "BIRD" instead. Both the "B" and the "D" sound are strong and should trigger the voice system.

WIRING OF THE ADAPTER CORD

Receiver



Adapter Cord with no connector



The wiring code for the cable is found on the identifier band. Use this information to wire your connector to the Adapter Cord.

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.

NOTES :

Use this page to log any information regarding the setup and wiring of the various target machines you will be using.

INITIAL ADJUSTMENTS

NOTE: To establish the time delays, the Clay Delay must be properly wired to a target machine first. Follow *Installation* (page 10) if you are not familiar with the unit.

The Clay Delay is designed to pause the release of the target. This is accomplished by adding a delay circuit (located in the control box) between the house button and the target machine.

To properly use the Clay Delay, a few settings must be altered to match the timing of the control box to the way you wish to shoot.

All adjustments for delays and sensitivity are located on the side of the control box. These adjusters are designed so that rotating clockwise increases the time or sensitivity.

The microphone sensitivity must be set prior to adjusting the voice delay. To properly set the circuitry, adjust in the following order:

- **The bottom adjustment is for the microphone sensitivity.** Rotate the selector knob on the front panel to the *Voice* position, ensure the microphone is plugged into the microphone jack and clip the microphone to the location where you will be using it. Speak your pull command while watching the voice light (on the side above the adjuster). Adjust the sensitivity to match your voice. The Clay Delay will not throw a target until a house button (located on the top) is pressed so you do not have to be overcautious about the unit being too sensitive.
- **The center adjustment is for the voice delay.** (You will need to release a target for this adjustment). Rotate the selector knob on the front panel to the *Voice Delay* position. Press any house button and speak a pull command. Note the delay between the command and when a target is released. Adjust this delay to match the time of a normal pull command.
- **The top adjustment is for the time delay.** (You will need to release a target for this adjustment). Rotate the selector knob to *Time Delay* and press any house button. Note the delay between when the button is pressed and when a target is released. Adjust the delay until the time is comfortable for you. This mode is used when you want to practice without a voice command and still be able to mount your gun and prepare for the shot.

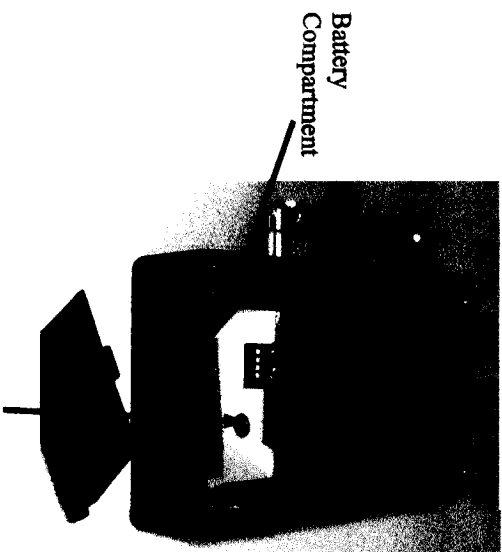
PULSE LENGTH ADJUSTMENT

The Clay Delay is preset to work with most target machines. This adjustment is only necessary if you are having problems releasing a target.

All target machines do not respond the same to the pull command. Most handheld release models require a short release signal while foot operated models may require a longer signal. If the preset signal is not long enough for your particular machine, increase the length of the pulse.

Before making an adjustment, observe the red indicator lights on the top of the receiver. Press a house button and observe the length that the light stays on. Now open the battery cover and using a small screwdriver, turn the adjuster clockwise, 1/4 turn. Observe the red lights again. The light should stay on longer and a target should be released. If there is no target, increase the time by turning the adjuster another 1/4 turn. Try again. If the adjuster is at maximum, the problem is not in the pulse length. Proceed to common problems and attempt to identify problem.

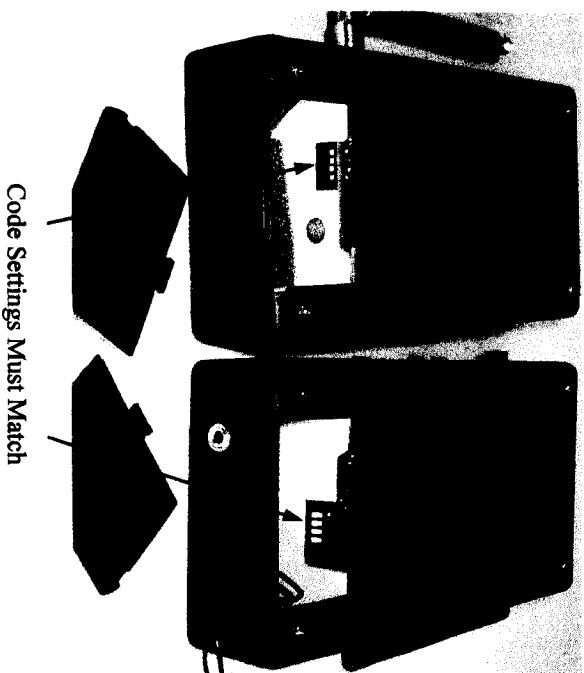
Caution: If you increase the time too much, you may trigger a double release.



SETTING CODES

Both the Control Box and the Receiver have to be set to the same code to operate together. By allowing the code to be user set, you can change the code if there is interference from some other source. You also have the ability to match the code of a different Clay Delay if you are shooting with a partner, allowing both of you to pull your own targets from the same machine (s).

Setting the code is easy. Turn the unit off and open the battery compartment. Using a small pointed tool, adjust the 4 position switches to match on both the transmitter and the receiver.



ANTENNA ALIGNMENT

The Clay Delay system uses a transmitter mounted on your side to send a coded signal to the receiver located next to the target machine. Both your body and the machine will modify this signal and determine the range you will achieve.

- Receiver

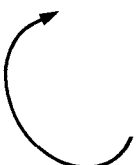
There are several factors that will interfere with the reception.

It may be necessary to move the receiver to the side of the house and possibly raise the receiver off a concrete pad. You may have to experiment with the placement of the box to find the best reception. For safety reasons, it is not advisable to place the receiver in the target machine enclosure.

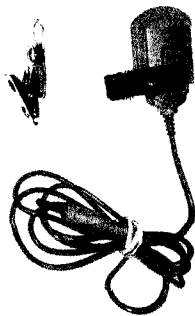
- Transmitter

Since your body will detune the signal, it has been found that the best signal is when the antenna is rotated down at a 45 degree angle and angled away from your body. This allows for the maximum signal to go around you when you are between the transmitter and the receiver.

Align antenna 45 degrees
away from your body and 45
degrees down.

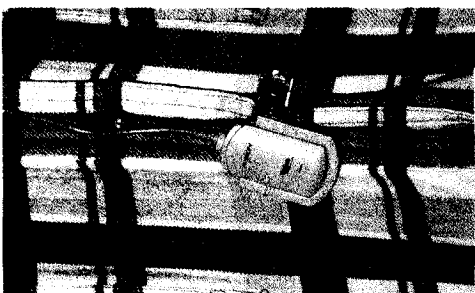


There may be times when you need a different way of attaching the microphone to your person. In that case, you can attach the microphone to the optional clip and rotate the unit to best fit your needs. The optional clip may also be used to hold the microphone cable in place or may be used in place of the control cable strain relief.



Microphone mounted in optional clip (with an extra clip off to the side).

Microphone with optional clip secured to shirt.



COMMON PROBLEMS

No target released in any mode

This is a problem that may occur anywhere in the system. It is necessary to follow these steps in the order listed to quickly isolate the problem:

- ◆ Turn the selector knob to Instant, insure the Receiver is turned on, and that the target machine is turned on and the proper Adapter Cord is connected. Using an incorrect cord may damage either the target machine or the Clay Delay!
 1. Press any house button and visually check the yellow armed light on the top of the control box.
 - If the light does not blink, the problem is in the Control Box. Try a fresh 9-volt battery. If the light still does not blink, contact CLAY DELAY for assistance.
 - ↓ If the light blinks, the control box is functioning properly and the problem may be outside the Control Box.
 1. Visually check the red lights on the Receiver. The lights should flash with the appropriate house button.
 - If they do not flash, the problem may be the Receiver is not turned on, low 9-volt batteries, or an incorrect signal code. Verify that both the Control Box and Receiver are set with the same codes. If the code is correct, replace the 9-volt battery in the receiver. Press a house button again. If a red light still does not flash, contact CLAY DELAY for assistance.
 - ↓ If a light flashes, the problem is between the Adapter Cord and the target machine.
 1. Verify you are using the correct Adapter Cord.
 2. Try reseating the connectors at both the target machine and the receiver.
 3. Connect the original manual release cord back into the target machine and verify proper machine operation.
 - If the machine operates properly, the problem may be that the Receiver is not sending a long enough trigger to release a target. Refer to page 13, pulse length adjustment. Increase the pulse length and try using the system again.
 - If unit still does not respond properly, contact CLAY DELAY for further instructions.

No target on Instant but unit works properly with Voice or Timed

This is a problem in the circuitry of the control box. Contact CLAY DELAY for repair of unit.

No Target with Voice but unit works properly with Instant

Check that the selector knob is set to the Voice setting.

1. Check that the microphone is totally seated into the microphone jack.
2. Verify the operation of the microphone by speaking into microphone and observe the side green voice light.
 - ↓ If the light does not flash with your voice, adjust the sensitivity to match your voice (see Initial Adjustments page 12).
 - ↓ If the light still does not flash, try using the back-up microphone.
 - If you cannot get the green light to respond, contact CLAY DELAY.
1. If the microphone is operating properly, observe the yellow armed light on the top side of the control box. Press any house button. The armed light will illuminate and stay on for 30 seconds. You must give the pull command within this time or the controller will cancel the house command.
 - If unit still does not respond properly, contact CLAY DELAY for further instructions.

Time Delay does not work properly

Check that the selector knob is set to Time Delay.

1. Adjust delay (see Initial Adjustments page 12).
3. If unit still does not respond properly, contact CLAY DELAY for further instructions.

Voice Delay does not work properly

1. Verify that the Voice setting works properly.
2. Check that the selector knob is set to the **Voice Delay** setting.
3. Adjust voice delay (see Initial Adjustments page 12).
4. If unit still does not respond properly, contact CLAY DELAY for further instructions.

High and Low are Reversed

This occurs when either the wiring to the machine plug is backwards or the machine plug is inserted into the machine jack backwards.

Federal Communications Commission (FCC) Regulatory Information

Notes:

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.