

# INSTRUCTION MANUAL

For the

'Canterbury Trap'



*230V/110V/12V models*

## List of Contents

- 1) Introduction
- 2) Components
- 3) Assembly of components
- 4) Installation and set up
- 5) Operator Tips
- 6) Product Maintenance
- 7) Spare Parts and Repairs
- 8) Manual Loaded Trap Warning and Recommendation
- 9) Warranty
- 10) Distributor contact details

### 1) Introduction

Congratulations on your purchase of the Canterbury Voice Release unit. We are sure that you will enjoy the freedom and consistency that operating this system provides your members. Use of this equipment has proven to:

- increase competitor's performance
- save costs, with less clays being wasted
- eliminate the requirement for a paid or voluntary 'puller'
- provide consistent timed release of the clay for more fairness
- increase participant enjoyment in this exacting sport.

The system has been designed to almost completely eliminate background noises which might be expected to trigger a false target release - talking, dogs barking, traffic, airplanes, etc, as well as the usual sport noises of gun-breaking and empty cartridge cases falling, referee's calls, loudspeaker system noise, etc. Extensive testing of this system has been carried out in all types of conditions that are generally encountered with this sport - heat, wind, rain, snow, etc

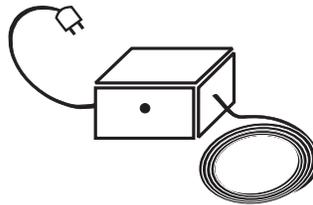
In addition, with the unique synchronised arrangement of microphones, calls from adjacent traps do not affect the performance of this system. Some shooters may experience an occasional non-release of a target if their voice

projection is not sufficiently sharp or audible. This may require some slight alteration to their call, in order for them to experience 100% pulls.

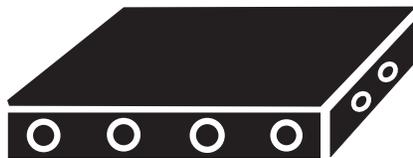
The system works equally well with left and right-handed shooters. The design of stands is such that there is no requirement to alter the position of the microphones in order for the system to function efficiently for either left or right handed competitors.

"Canterbury's" are now used in all major shoots and most clubs - worldwide.

## 2) Equipment components



**Relay unit** - with two or three pin plug for connection to 230V/110V mains power and bare flex for connecting to trap. Screw in connector for main power lead. (12V unit supplied on request)



**Control box** - houses the electronics in a weatherproof container and has connectors for all seven cables. There is no predetermined order for connection of cables, if the cable connection fits then it will work.

**Main cable** - connects the relay unit to the electronic control box, with connectors at either end.

**Remote trigger switch** - with lead, which connects to the main control box. Toggle on/off switch, led. display light and over-ride manual release button.

**Microphone cables (5)** - connects microphone to control box, with two-pin connectors at either end.

**Microphones (5)** - one-bolt connection to stands. Cable connects to underside of microphone.

**Microphone stands** - base and upright as shown. Bolt together with two wing nuts and washers provided

**Control unit weather cover** - and four plastic tubes, for protecting the control unit.

**Power unit bracket** - to secure the power supply inside the trap house

### 3) **Assembly of components**

3.1 The relay unit connects inside the trap house to the mains power supply (through the two or three pin plug) and to the trap machine (through the two wire flex which requires wiring to a plug to suit the manual puller socket). Each unit is supplied to suit your local voltage requirements - 230V or 110V. Power supply can be by 12V battery on request.

3.2 Dyna bolt the small bracket for the power supply unit onto the trap house wall in such a position where the power cable can reach a power socket and the trap cable can reach to the trap machine. Locate the power supply on the bracket so that the connecting main cable to the control unit feeds up through the hole in the base of the bracket. Use the hook on the bracket to loop the main cable when the system is not in use.

3.2 The main power cable then connects the relay unit to the control box and has a 3-pin connector on either end. It does not matter which way around this cable is connected to the relay unit or control box.

3.3 Connect one microphone to each stand - bolt and wing nut provided.

3.4 Connect the microphone upright and base by employing the two wing nuts and washers provided.

3.5 Connect one microphone lead to each microphone and then to one of the five 2-pin sockets on the control box. It does not matter which way around these cables are connected. Any excess cable can be gently looped over the lug on the upright. Ensure that there is some slack where the cable connects to the microphone and use a cable tie to locate each cable at the top and bottom of the stand. This will prevent any damage to the connection due to force being applied to the microphone, rather than to the stand, when moving this assembled unit for handicap shooting.

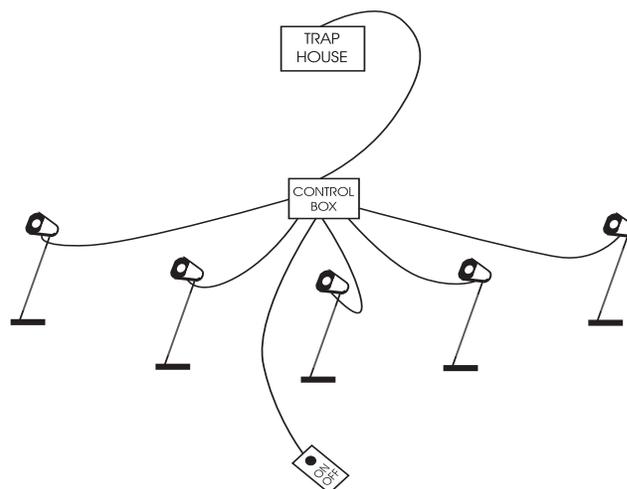
3.6 Repeat steps 3.3-3.5 until all five microphones and cables are assembled.

- 3.7 Connect the remote trigger switch to the control box via the 4-pin socket.
- 3.8 Slide the main control unit up under the metal weather cowl and lock it into position by sliding the four plastic tubes up onto each foot of this cowl. The control unit will now be suspended up under the lid of this cover and well off the ground or grass. This ensures that moisture is kept well away from the control unit as well as providing some protection from errant shotgun blasts!

You system should now be completely connected and ready for testing.

#### 4) Installation and set up

As per the diagram below, cables should be laid along the ground. Place the control box on the ground in front of the #3 shooting position. Lay the microphone cables along the ground in such a way that they run across the front of the shooting stations and alongside each of the handicap walkways. This will ensure no cables lay across the walking route of any shooters, thus making a cleaner layout and reducing the risk of catching the shooters feet as they move around the walkways. Wrap any excess microphone cable around the lug on the microphone stand to ensure that the least amount of excess cable is lying on the ground.



Whilst the microphones are non-directional, from experience it has been found that standing each microphone either directly in front of the shooters or slightly to the left is preferable. However, whatever final position is arranged, ensure that the microphone stand is not so close to a shooter that they can bump or touch the stand with their gun barrel. Not only may this cause damage to the gun but it may also cause a false target release due to vibration in the microphone.

Lay the remote trigger switch and cable along the ground to a position behind the competitors, where the referee may stand easily approximately 3 - 5 yards back. At this position their call can still be heard clearly by competitors, but is unlikely to trigger a false release.

## **5) Operator Tips**

### **NO CONTROLS**

The Canterbury Voice Release system features an optimised sensitivity setting that responds to nearly all quiet calls, yet rarely throws a false target from background sounds. There is no provision for adjustment of sensitivity, volume, balancing of microphones, etc. Under no circumstances should any person remove the lid of the control box to attempt to adjust any setting of this equipment. If there is a persistent problem with the equipment releasing false targets or missing calls, then refer to the Owner Manual, your nearest distributor or the manufacturer, for advice.

**Removal of the lid of the control box will invalidate the warranty on this equipment.**

### **NO CROSS TALK**

Units can be used on adjacent ranges. Calls and gun shots from adjacent ranges rarely cause false triggering. The referee or scorer can comfortably stand behind the shooters and call miss-hit targets without releasing targets. It is suggested that this person should maintain a minimum distance of three to five yards behind the competitors to both eliminate the possibility of interference and also to reduce the potential for a false release.

### **BACKGROUND SOUNDS**

All 5 microphones monitor the general level of background sound to filter extraneous noises and so eliminate almost all potential for false releases. Where high wind is being experienced or there is other consistent background noise level, competitors may have to call a little louder. The system relies on one microphone receiving a louder sound than the others do and therefore triggering the target release. This is no different to a human 'puller' needing to be able to hear the call, where there is other interference.

Shooters on the line should avoid (as they currently do under manual release) talking, coughing, etc. A referee standing 3 - 5 yards behind the line, if located equally behind lanes 2 & 3 or 3 & 4, can report 'misses' without normally firing false targets. If a referee has an abnormally loud voice, and is triggering false

releases, then it may be prudent to locate this person's position a few more feet to the rear.

Closing of the shotgun, gunshots, the noise of empty cartridge shells hitting concrete and calls from adjacent fields will not normally release a target. Some early model semi-automatic shotguns may release a false target, in which case the competitor should be encouraged to turn slightly from the microphone to eject shells and reload - however it is not necessary for them to move from their position.

This equipment works equally well with competitors who use a whistle to 'pull' their target and also with persons who shoot from a wheelchair.

### **MICROPHONE POSITION**

For best results, the microphones should be placed in front of and slightly to the left of the shooting position so that the microphone is approximately 1 yard from the shooter. Ensure that the microphone is sufficiently to the front of the shooter so that there is no likelihood that they might accidentally bump the barrel/sight tip of the shotgun. Not only does this safeguard the shooter's gun, it also prevents any likelihood of a false release of a target through vibration of the microphone stand.

Having the microphone placed on the left does not disadvantage a left-handed shooter, as the unit works equally with left and right-handed competitors.

### **EXTREME WIND/EXCESSIVE ECHOES**

In some extraordinary circumstances where the shooting range is situated in a location which may cause excessive echo or where high wind blows directly into the mouth of the microphones, it may be necessary to take some preventative action if false releases are being experienced.

In order to reduce the sensitivity of the microphones where such an event may occur, two simple operations are suggested to return the unit to its normal operating parameters.

- a) Material such as woven stocking can be placed over the mouth of the microphone and secured by a rubber band or string
- b) Inserting pieces of polystyrene (3 - 4 pieces is all that is required) or a circle of foam gently into the mouth of each microphone can reduce the sensitivity to false release

Please note that these actions should not be taken under normal conditions, as they will reduce the standard effectiveness of the equipment.

## **EXCESSIVE RAIN/MOISTURE**

This equipment is moisture resistant at all times, however some precautions should be taken when operating the Canterbury Voice Release in constant rain or excessive moisture.

It is recommended that where such weather is encountered, the control box be placed off the ground on an area such as concrete or on a wooden block. Take care to ensure that the control box is not immersed in water or covered in mud.

It is recommended that in times of rain or persistent moisture, the remote trigger switch should be covered with a plastic bag and a rubber band can be used to clamp the end of the bag around the cable. This will prevent water from seeping inside this unit and yet still allow maximum use of the switching arrangement. Again, when not in use, ensure this unit is placed on either concrete or a wooden block in such a manner as to lift it from the potential of immersion in water.

## **TRAP RELOAD/RETURN TO BATTERY**

For safety reasons and to give the trap time to reload, a 2.0-second time out is incorporated within the control box of this equipment. If a call is made while the trap is reloading, the competitor may get a no target or what appears to be a slow pull, if it catches the end of this cycle.

On calling, if a no target is experienced and the voice release has activated, you will not get another target for a further 1.6 seconds due to this in-built time out.

***So remember if no target is thrown after a call, then give the trap time to reload.***

## **REFEREE**

Advise each squad that no talking should be allowed on the line and for competitors with semi-automatic guns that they should shut these with care or inside the 2.0 second time out. In some cases, the different noise characteristics of some semi-automatic guns can cause a false release.

Use the manual release button to show each squad a target, or have the #1 shooter give a call over the microphone. Check that the equipment is operating

correctly by watching the led (red light on the remote trigger switch) to note that it "winks" off on the call of each competitor.

If the led winks off, but a target is not released, then there is a problem with the trap.

If the led does not wink off then a problem exists with the voice activation equipment and the cable connections should be checked and the system re-tested.

If a flag goes up for a trap problem, if a gun breakdown is experienced or as soon as the squad finishes, then switch off the equipment, using the **ON/OFF** button.

The referee should remain three to five yards behind the competitors to eliminate any chance of their call releasing a false target. If a false target is released by the referee's call, then vary the position to find a suitable distance where competitors can hear the call, yet a false target is not released.

## **TWO MINUTE SHUT DOWN**

Each unit has a built in shutdown feature, which operates if the equipment has not received a call for 2 minutes. This is a safety feature to prevent accidental target release if a unit may have been left switched on. If the unit has shut down under this feature then it will be noticeable through the red led light being "off". To reactivate the system, switch the **ON/OFF** switch, OFF then ON again. The red led will turn back on and the unit will be ready for use.

### **6) Product Maintenance:**

Firstly it is important to remember that this product is based on electronic components and as they are being used in an outdoors environment, they may be subject to harsh and imprudent treatment. Where possible, always handle the various components with respect. Not only will this ensure optimum performance of the equipment - it will also increase the product's life span.

There are several areas where regular maintenance on this product will ensure long and trouble free usage:

- 1) It is recommended that the socket connections be cleaned occasionally with a dry electrical spray (eg. CRC/WD40) and be brushed clean of any dust and grit that may accumulate.
- 2) If any components are immersed in water then it is recommended that they be thoroughly dried before re-use. A spray such as CRC/WD40 can be used.

- 3) The remote trigger switch, if subjected to dirt, dust, water, grit, coffee, soft drink, etc, can malfunction via the toggle on/off switch not making a clean connection. If this occurs, then spray liberally with a solvent spray (eg. CRC/WD40) to clean the connection and 'work' the toggle switch until it restores to its proper function.
- 4) Use of a small amount of a di-electric silicon, eg. 'No-Ox-Id', compound in all sockets can ensure perfect electrical contacts, in regions where moisture may cause problems.
- 5) Cables may be subjected to tension through competitors tugging to shift microphone stands in handicap situations. If unnecessary force is used then it is possible that the cable may be pulled from its connection clamp. Simply use a Philip's screwdriver to re-assemble.
- 6) Over prolonged use, cable connectors can sometimes become loosened and may fail to provide a clean electrical connection. Check occasionally for tightness and if required, either lightly spread the male pin of the connector or close the female socket through using a fine screwdriver or knife blade. Do not over-tighten or use too much force as this may cause breakage to the connectors.
- 7) Ensure that the relay unit in the trap house is permanently located on the wall sufficiently away from any potential damage situation. Check the connections for dirt or dust build up and clean. Ensure that moisture does not enter this unit.

## 7) **Spare Parts and Repairs**

### **SPARE PARTS**

All Canterbury distributors carry a full range of spare parts. This will ensure that in the unlikely event of damage to any part of this equipment, you can quickly source new components. Please contact your nearest distributor for your requirements.

### **REPAIRS**

All Canterbury distributors are trained to undertake repair work on this equipment. In the event that your system needs some repairs carried out, then ensure that you use an authorised Canterbury repair-person. Check with the manufacturer via e-mail at [www.cvr.co.nz](http://www.cvr.co.nz) if you are unsure.

## 8) Manual Loaded Trap Warning and Recommendation:

As with all equipment on a trap-shooting field, safety is of paramount importance. This cannot be stressed highly enough and it is extremely important that all persons who may be involved in the set up and use of a Canterbury become familiar with its operation.

Of particular concern is the situation where a club may still be using manually loaded traps, rather than automatic loaders. The potential for mishap is increased greatly where a person is located inside the trap house while the trap is being used.

Whilst the Canterbury operation is exactly the same as a manual release button, great care should be taken where it is linked to a manual loaded trap and competitors are not familiar with its automatic response.

As the Canterbury cannot make a mental judgement on whether the trap loader may or may not be ready for a target release, as opposed to a manual puller, the activation of this system is reliant entirely upon the competitor.

Each Canterbury is equipped with a 2.0 second shut down after a call and before another target can be released. This timing is set to provide sufficient time for the trapper to reload the trap, yet still be a fast enough cycle for top competitors to enjoy a quick calling squad. In fact, most competitors have a call time of around 3 - 5 seconds.

It is strongly recommended that where a club is using manual loaded traps, that all competitors be briefed on the need for caution on the squad to ensure that no inadvertent call is made which may release a target and cause injury to the trapper.

If any club may wish to have the 2.0-second shut down extended to 2.5 or 4 seconds, then this can be undertaken by your distributor at a minimal charge. Please contact your distributor and arrange for the control box to be returned to them for this adjustment to be made.

**Warning: Under no circumstances should any club or individual attempt to make adjustments inside the control box themselves, as not only will this invalidate the warranty, it may also result in damage to the product.**

## Warranty

### Congratulations on your purchase!

This Canterbury Voice Release product is warranted against faulty materials and labour for a period of twelve (12) months from the date of original purchase.

If service is required during the warranty period, please contact your nearest Canterbury Voice Release distributor. These repairs will be carried out at no charge to the owner, subject to the conditions specified herein.

The owner is responsible for any transportation and insurance costs if the product has to be returned for repair.

This warranty does not extend to defects or injuries caused by or resulting from causes not attributable to faulty parts or the manufacture of the product, including but not limited to, defect or injury caused by or resulting from misuse, abuse, neglect, accidental damage, improper voltage, liquid immersion, vermin infestation, or any other alterations made to the product which are not authorised by Canterbury Voice Release International Ltd.

Please retain your sales documentation, as this will need to be produced to validate a warranty claim.

***IMPORTANT: DO NOT RETURN THIS CARD TO CANTERBURY VOICE RELEASE INTERNATIONAL LTD or YOUR LOCAL DISTRIBUTOR.***

For your reference only, please enter the particulars of your purchase below and retain, along with your purchase documentation.

Model:

Serial Number:

Date of Purchase:

Distributor/Dealer:

**SALES AND SERVICE CENTERS**

<b>MANUFACTURER</b>	<b>Alaska</b>
<b><u>Canterbury Voice Release Intl Ltd</u></b> 457 Marine Parade, South New Brighton Christchurch, New Zealand Tel: 64 3 356 0327 Fax: 64 3 356 0328 E-mail <a href="mailto:bruce@cvr.co.nz">bruce@cvr.co.nz</a> <b><u>Mr Bruce Rickard</u></b>	<b><u>Starichkof Enterprises</u></b> PO Box 50 Anchor Point, Alaska 99556 Tel: (907) 235 5534 Fax: (907) 235 6373 <b><u>Mr Dave INMAN</u></b>
<b>NW USA + BC, Canada</b>	<b>Southern USA</b>
<b><u>Northwest Shooters Supply</u></b> 10410 Douglas Drive S.W. Tacoma Washington 98499-4817 Tel: (253) 582 2940 Fax: (253) 584 2707 <b><u>Mr Ron Tree</u></b>	<b><u>Wells Equipment</u></b> 3302 C R. A3901 HCR 72 Stanton, Texas 79782 Tel: (915) 270 0535 Fax: (915) 432 2694 <b><u>Mr Theodore WELLS</u></b>
<b>Central USA</b>	<b>Eastern USA</b>
<b><u>Champion Shooting Supplies</u></b> N5512 CTH Onalaska, Wisconsin 54650 Tel: (608) 781 5073 Fax: (608) 781 5076 <b><u>Mr Ken Bethke</u></b>	<b><u>Target Shotguns</u></b> 330 Airport Road PO Box 66, Arden North Carolina 28704 Tel: 1 800 684 6329 Fax: (828) 654 9925 Web: <a href="http://www.targetshotguns.com">www.targetshotguns.com</a> <b><u>Mr Bob Schultz</u></b>
<b><u>Service only</u></b>	<b><u>Service only</u></b>
<b>Mr Bill May</b> 156 Kaneg Ridge Road Greenbrier AR 72058 Tel: (501) 679 4626	<b>Mr Bryan Pierce</b> 432 Oakridge Drive Portage Wi 53901 Tel: (608) 617 6631