

INSTRUCTION MANUAL

For the

'Canterbury
ZZ / Helice'



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1) Introduction

Congratulations on your purchase of this Canterbury Voice Release ZZ/Helice unit. We are sure that like many other clubs and individuals worldwide, you will enjoy the freedom and consistency that operating this system will provide you and your club members.

This unit has been fully developed with advice from US ZZ manufacturers and performs to the optimum requirements of both the individual who wishes to practice, and the club using it in competition.

The Canterbury Voice Release range of products has been developed in New Zealand in response to the needs of international, national and local shotgun sports-people. This system provides a consistent release of a target on the call of the shooter and eliminates the requirement for a manual 'puller'.

The system has been designed to almost completely eliminate background noises which might be expected to trigger 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 within this sport - heat, wind, rain, snow, etc

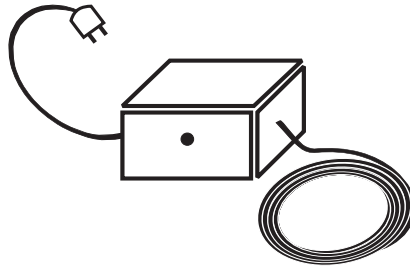
In addition, with the unique synchronized arrangement of microphones, calls from adjacent traps/fields do not affect the performance of this system. Some shooters may experience an occasional non-release of a target if their voice projection is not sufficiently sharp or audible. This may require some 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 stand 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.

Graham Callander, who has had a distinguished career in electronic research and development in New Zealand, completed development of the Canterbury Voice Release system in 1998. Since that time, Canterbury Voice Release systems have been bought and used by the majority of New Zealand clubs and is now so well accepted that most major international competitions within Trap and Down The Line disciplines are now shot over it. This was directly as a result of competitors' demands for a fairer, more consistent target release.

Once used in competition, competitors are reluctant to return to manual target release.

2) Equipment components



RELAY UNIT - with US three-pin plug for connection to mains power and two wire flex for connecting to trap. Two three pin sockets are provided for the main cable and the trigger unit – these are interchangeable.



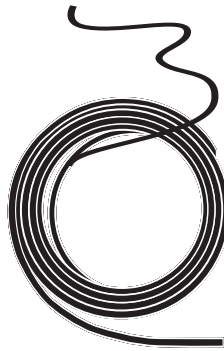
MAIN CONTROL CABLE - connects the relay unit to the electronic control box, with connectors at either end.



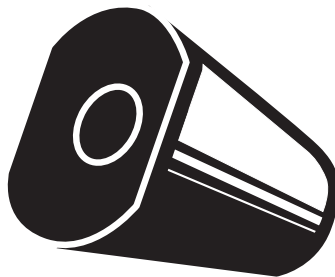
CONTROL BOX - houses the electronics in a weatherproof container and has connectors for all cables. If the cable connection fits then it will work – i.e. fit any 2-pin connectors to 2-pin sockets and 3-pin connectors to 3-pin sockets and the system will work.



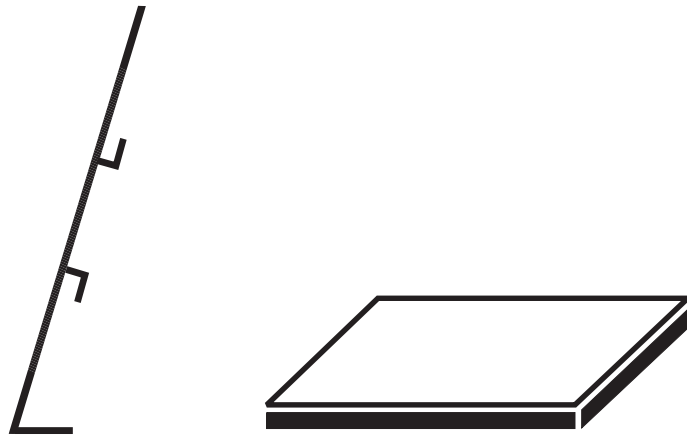
REMOTE TRIGGER SWITCH. Connects to the main control box. Toggle “Auto/Manual” switch, LED display light and ‘Manual” release button. Refer to manual for full Trigger operations.



MICROPHONE CABLES. Connects microphone to control box, with two-pin connectors at either end.



MICROPHONES. One-bolt connection to stands. Cable connects to underside of microphone.



MICROPHONE STANDS. Base and upright similar to above. Bolt together with two wing nuts and washers provided

COMPLETE MICROPHONE UNIT ASSEMBLED

3) Assembly of components

- 3.1 Connect the main base plate (identified by its construction with feet to lift the control box off the ground) and main metal upright (identified by its construction with extra brackets) together with wing nuts provided. Upright stand should lean towards the shooter with the trigger location plate facing the shooter to the right of the microphone mount and on a slight angle. This positions the trigger unit, when held in the mounting, in a position where it can easily be seen. This is evident when the LED light is on. Microphones are activated with use of the “Auto” switch on the trigger unit.
- 3.2 Attach one microphone to the top of the upright stand facing **TOWARDS** the shooter. This microphone attaches through the hole in the bracket provided and is locked in position with the wing nut and washers provided.
- 3.3 Attach the second microphone to the base of the upright facing **AWAY** from the shooter. This microphone attaches through the hole provided in the bracket mounted to the upright stand by using the wing nut and washers provided.

- 3.4 Attach the control box to the base stand and firmly push onto the Velcro supplied. This is industrial strength Velcro and is much stronger and durable than standard household Velcro.
- 3.5 Connect the upper microphone to the control box by use of the longer of the two cables – 1 yard long. Connect the other microphone using the 1-foot long cable. Connect both cables to the two-pin connections on the side of the control box.
- 3.6 The trigger has two connection points, depending on whether an individual wishes to practice or whether the unit is being used for competition.

For practice situations: Connect the trigger unit to the control box (3-pin connection) and then push the trigger firmly onto the Velcro on the upright stand unit to lock it into position. It can be easily removed by lifting from the top of the hand piece and can then be held by the referee or scorer if required.

The trigger is activated on “Auto”. This activates both microphones to work on the shooter’s call. In this situation, it is not necessary to ask if the ‘trapper is ready’, but simply call “pull” when ready for a target

For competition situations: Connect the trigger unit onto the 3-pin socket on the relay unit. This unit will be located within the trap house when connected to the electrical circuit for the traps and so is easily to hand for the trapper.

To activate the unit, switch the ‘Auto/Manual’ button to ‘Manual’. This de-activates the microphones until the red push-button is pressed. Hence to operate the unit, after the shooter has called “trapper ready”, press the red button and the microphones will now be live until the shooter fires. Release the button until the shooter is ready for their next target and then depress it again. Continue this operation until the competition is concluded.

- 3.7 Connect the main control cable to the control box and relay unit through the 3-pin socket provided. It is advisable to secure this cable to the microphone stand with either cable ties or looping it around the base of the upright stand. This ensures that any strain exerted on the cable puts stress onto the cable itself and not onto the socket connecting the cable to the control box. Damage to the socket connection point could result if you do not take this precaution.
- 3.8 Connect the relay unit to the Trap wiring system that is already on site. A three-wire cable is provided for connection to the trap machine mechanism.
- 3.9 With all connections made secure, the system should be checked that it is working correctly by switching on the power and visually checking that the LED light on the trigger unit is operating. The voice call can then be checked without releasing a target, by watching the LED light “wink” out when a call is made over a microphone.

4) Installation and set up

Once assembled the microphone stand should stand in front of the shooters position to either right or left of the shooter (depending on whether they are right or left handed) where the structure will not inconvenience the shooters mobility or be visually obtrusive.

The main control cable should be laid along the ground to provide the easiest route between the trap house and shooting position. Depending on whether practice or competition is being run will dictate whether the trigger unit is attached to the microphone stand or located inside the trap house. Arrange as required.

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 Owners 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 target release. The referee or scorer can confidently 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

When fully assembled the 2 microphones monitor the general level of background sound to filter extraneous noises and so eliminate almost all potential for false releases. The system relies on a good human voice call over the top microphone to trigger the target release. This is no different to a human 'puller' needing to be able to hear the call, where there is other interference.

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 stand 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 or right of the shooting position so that the microphone stand is approximately 1 yard from the shooter. Ensure that the barrel or sight-tip of the shotgun does not accidentally bump the microphone. This will safeguard the shooter's gun and also prevent any likelihood of a false release through vibration of the microphone stand.

EXTREME WIND OR 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, the following 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 foam gently into the mouth of each microphone can reduce the sensitivity to false release
- c) Turn the top microphones upwards or turn the whole stand sideways to the shooter if excessive wind is causing a problem.

Please note that these actions should not be taken under normal conditions, as they can 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.

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, when using this equipment in practice situation, 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.

TIME OUT

For safety reasons, a 2.5-second time-out is incorporated within the control box of this equipment, after a call, before the equipment can be re-activated. If a call is made within this time period, the competitor will get a 'no target'.

On calling, if a no target is thrown, and the voice release has activated, you will not get another target for a further 2.5 seconds due to this in-built time out.

So remember if no target is thrown after a call, ensure the competitor has allowed 2.5 seconds between calls.

REFEREE

Advise each squad that no talking should be allowed on the line and for competitors with semi-automatic guns, they should shut these with care or inside the 2.5-second time out. In some cases, the different noise characteristics of some semi-automatic guns can cause a false release.

Check that the equipment is operating correctly by watching the LED light (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 traps.

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.

Operate the trigger unit in 'Manual' position. The microphones will only be activated by depressing the red button and then the trap will be activated automatically on the competitors call. Once the competitor has called "Trapper Ready" and you have replied "Ready", then depress the red button and await the competitors call for "Pull". This call will activate the trap as per normal and you can now release the red button until the competitor is ready for the second and consequent targets.

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 (e.g. 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. Again 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 'auto/manual' switch not making a clean connection. If this occurs, then spray liberally with a solvent spray (e.g. CRC/WD40) to clean the connection and 'work' the toggle switch until it restores to its proper function.
- 4) Cables may be subjected to tension through competitors moving the stand. If unnecessary force is used then it is possible that the main control cable may be pulled from its connection clamp. Simply use a Phillips screwdriver to re-assemble.
- 5) 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.
- 6) When first setting up your CVR system, ensure that the relay unit in the trap house is located 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.

9) Warranty

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: