

# **BRB Systems USA Co.**

## **Instruction Manual.**

### **Trap Voice Release System. 12V & 120V Versions.**

**IMPORTANT: Read and understand this manual before assembling, installing or using this system. Improper use of this system can cause serious injury.**

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## **(1) Safety Information.**

**CAUTION:**

This system is powered by electricity. To reduce the risk of electric shock, do not remove any cover from the apparatus. There are no user serviceable parts inside. Refer servicing to BRB Systems USA Co.

Make certain that any person assembling or installing this system has read and fully understood this Instruction Manual. It is your guide to safe and proper operation of this system.

- System power supply units marked **12V only** are to be used with 12v dc power sources only and are supplied ready for connection to a 12V car style battery. Car batteries contain acid and so extreme care must be taken when handling them. 12V car batteries are capable of supplying large amounts of current and care must be taken not to connect the + (red) and – (black) terminals together.
- System power supply units marked **120V only** are to be used with 120V ac power sources only.  
Do not defeat the safety purpose of the polarized or grounding type plug fitted to this apparatus. If the provided plug does not fit into your outlet, consult a qualified electrician for rectification.  
Exterior 120V outlets should be GFCI protected for your safety. If the outlet is not GFCI protected then contact a qualified electrician for rectification.
- Protect the power cord from being walked on, pinched or damaged in any way.
- Unplug this apparatus during lightning storms or when unused for extended periods of time.
- Use only the attachment parts / accessories provided by BRB Systems USA Co.
- Do not allow liquid entry into the system components.
- Ensure that the trap is disconnected from its power source and unloaded before connection of the Trap Voice Release System. Failure to do so could result in the unexpected operation of the trap causing serious injury.
- Ensure that the trap is disconnected from its power source and unloaded and that it is completely disconnected from the Trap Voice Release System before attempting loading, maintenance or repair of the trap. Failure to do so could result in the unexpected operation of the trap causing serious injury.

- Extreme caution must be taken when a manually loaded trap is in use. This system is not able to determine whether a loader is ready for a target to be launched. Therefore it is extremely important that shooters using the system be instructed on the importance of not making inadvertent calls as this may cause the system to operate the trap and cause serious injury to the loader.
- Ensure that any cabling associated with this system is routed so as not to cause a tripping hazard for the systems operators or users. Where cabling must be routed across walkways the use of rubber walkway mats is recommended.
- Always remember that the manual button release will operate even if the system power is switched off, failure to do so may result in serious injury.

## **(2) System Component Assembly.**

Each Trap Voice Release System is supplied with the following components:

- 5 x microphones.
- 5 x microphone cables.
- 5 x microphone stands.
- 1 x power supply / relay box.
- 1 x main control box.
- 1 x main control box cover.
- 1 x main control cable.
- 1 x button box with cable.
- No-ox terminal anti-corrosion compound.
- 5 x weight plates
- 1 x weight plate assembly kit.

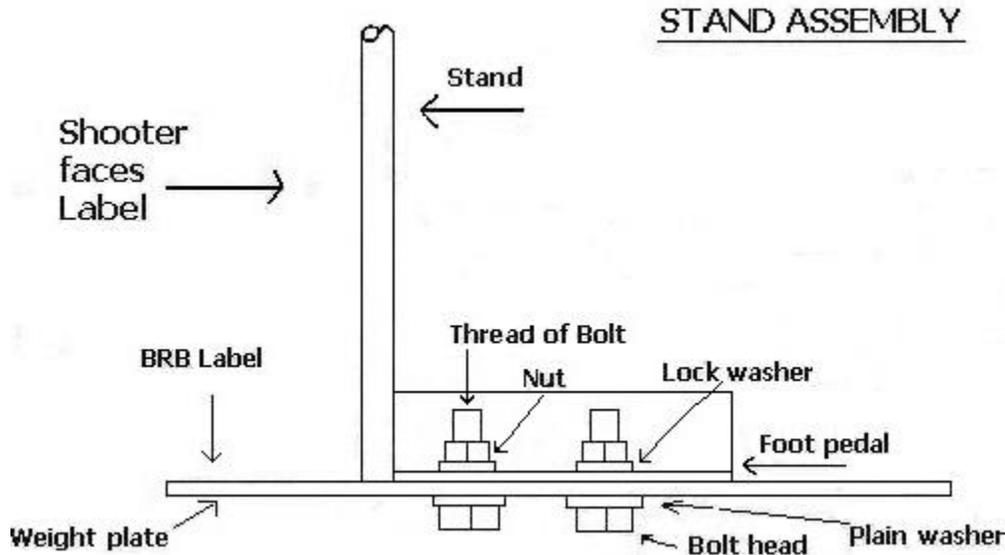
### **Microphones.**

Each of the 5 x microphones supplied, bolts to the top of each of the 5 stands with the bolt, washers and wing nut supplied. The microphone should be bolted to the stand so that the foot pedal faces away from the shooter. Set the angle of the microphone to an angle that would direct the microphone opening toward and average shooters head height at approximately 3 ft away. Each microphone is connected to the main control box with a microphone cable.

When connecting the microphone cable to the microphone, form a relaxed loop in the cable from the plug and wire tie the cable to the stand to prevent excessive strain on the microphone socket.

## Microphone Stands.

Each of the 5 lightweight stands supplied is made to be mounted to a weight plate. Using the assembly kit provided, bolt each stand to each weight plate as shown in the diagram below. Each stand has integral brackets for the easy storage of the unused microphone cabling.



## Microphone Cables.

Each of the 60 ft long microphone cables can be identified by the 2 pin plugs fitted to each end and are connected between a microphone and the main control box.

To reduce strain on the microphone socket, when connecting to the microphone, leave some slack and tape the cable to the stand.

## Power Supply / Relay Box.

The 12V version is supplied with alligator clips (red for the + terminal and black for the - terminal) and is connected to a 12V battery such as a car battery.

When connecting always observe the polarity or damage may occur to the system.

The 120V version is supplied with a 3 pin grounded plug for connection to a mains 120V grounded power supply.

The power supply / relay box is located in the trap house and is connected to the control box via the main control cable.

The trap connection cabling is made to be a direct replacement for the manual button release cable. For safety reasons it is recommended that the connection of this cable, to the trap, be

made by using the trap manufacturer recommended plug. Due to the large variety of plugs used by trap manufacturers BRB Systems USA Co. does not supply this part with the purchase of a voice release system. The appropriate plug that will fit your trap will be available from the trap manufacturer.

### **Main Control Box.**

The main control box has 7 connections and is connected to the 5 x microphones with the 2 pin microphone cables, the power supply / relay box with the 3 pin main control cable and the button box via its 4 pin plug.

The enclosure is IP65 rated as ‘splash proof’, but should not be immersed in water. As with any electronic equipment it is recommended that this unit be treated with respect and kept dry. Installation of the control box in the control box cover provided will keep the control box off the ground, out of the rain and direct sun and offer a measure of protection against mechanical damage.

### **Main Control Cable.**

The 60ft long main control cable connects between the main control box and the power supply / relay box and can be identified by the 3 pin plug on each end.

### **Button Box with Cable.**

The button box connects via it’s 60ft long cable to the main control box and is connected to the 4 pin socket.

The button box has a push button for manual target release, a rocker switch to power the system on and off and an indicator LED to indicate the system status.

### **No-ox Anti-corrosion Compound.**

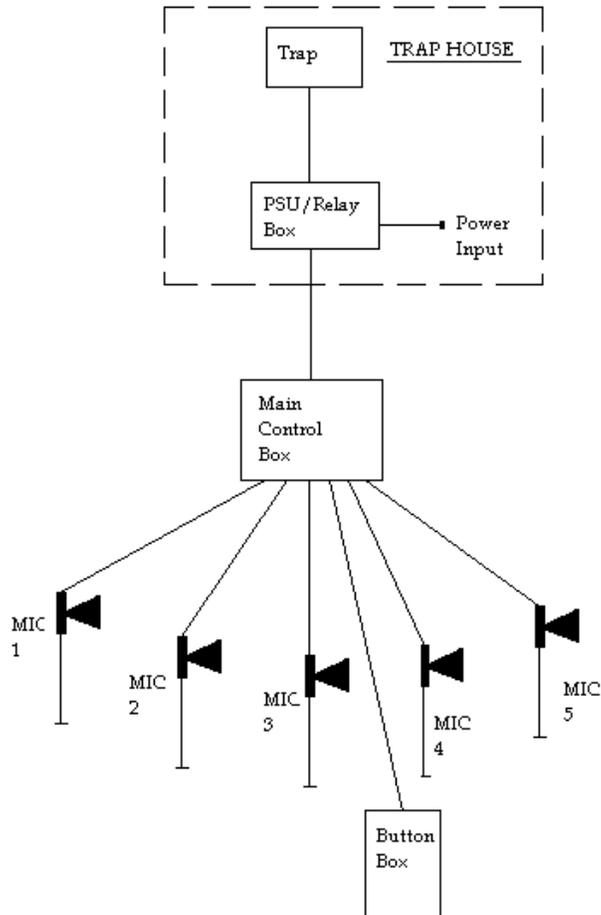
Each Trap Voice Release System comes with no-ox compound applied to the plug and socket connections of the entire system

It is recommended that periodically a thin coating of the compound provided be applied to the plug and socket connections to ensure good contact connection and trouble free use of the system.

### (3) Installation.

For ease of installation, the Trap Voice Release System is manufactured in such a way that if the plug fits the socket then the connection is correct.

Install the system components as in the diagram below.



A- Place the main control box in front of #3 shooting position.

B- Set each of the 5 microphones with stands in their respective shooting positions, with the foot pedal facing away from the shooter.  
A distance of approximately 3ft between the shooter and the microphone is ideal. The microphone can be offset to the left or right or be placed directly in front of the shooter without any noticeable effect on operation.  
The microphones can be permanently mounted inside covered stands if a distance of 3ft to the shooter can be attained.

C- Connect the 5 x microphone cables between the microphones and the main control

box, by laying the cables along the ground, taking care to avoid creating a tripping hazard.

D- Connect the button box to the main control box and lay the cable along the ground to a desired referee position behind the shooters. Ensure the power switch is in the off position.

E- Connect the power supply / relay box to the main control unit with the main control cable.

## **(4) Operation.**

There are no settings or adjustments that can, or need to, be made to the system by the user.

After checking that no work is being carried out to the trap, connect the Trap Voice Release System to its power source.

Switch the On / Off rocker switch on the button box to the On position. The indicator LED on the button box should light to indicate that the system is ready for use.

A target can now be released by the shooter upon his call.

With the microphones installed approximately 3 ft from the shooter, the shooter should be able to call for a target in the same way as he would if the trap was being operated by a person. There is no need to turn and call toward the microphone or call excessively loudly.

When a call is detected by the system the indicator LED on the button box will extinguish and a target will be released.

Once a call is detected the system will not operate again for 2 seconds, in order to allow the trap time to reload.

When ready to accept another call the indicator LED will light.

To avoid the referee releasing false targets the referee position with the button box should be located approximately 10ft behind the shooters.

Should the referee have a particularly loud or soft voice then the distance should be adjusted accordingly.

Note: The Trap Voice Release System has integral filtering to eliminate background noise etc. however all 5 microphones are operational when the system is switched on. Therefore the referee must make it known to the shooters that in the same way as with a manual release system there should be no unnecessary talking on the line.

To manually release a target the referee can operate the trap by pressing the push button on the button box. When the push button is pressed the indicator on the button box is extinguished and the target is released simultaneously.

Note: The push button release will operate even with the system power switched off.

To avoid the accidental release of a target when the system is not in use a 2 minute safety shut down is built into the system. When the system shuts down in this way the indicator LED on the button box will flash continuously. To return the system to operational status simply switch the On / Off switch on the button box Off and then On. When this is done the indicator will light continuously to show the system is ready.

## **(5) Maintenance.**

The rugged manufacture of the Trap Voice Release System should ensure many years of trouble free use if it is not abused and given simple maintenance.

As with any electronic equipment the system should be treated with respect.

- Avoid moving any component of the system by pulling it by the cabling.
- Do not allow any component to be immersed in water.  
Due to the trap house often being subterranean and water logged keep the power supply / relay box off the floor.  
The button box can be protected by simply covering it with a plastic bag and securing it with a rubber band.  
The main control unit can easily be protected by placing it inside the provided control box cover.  
Placing thin plastic bags over the microphones, secured with rubber bands protects them from water and appears to have no noticeable effect on operation.
- Each Trap Voice Release System comes with no-ox compound applied to the plug and socket connections of the entire system.  
It is recommended that periodically a thin coating of the compound provided be applied to the plug and socket connections to ensure good electrical contact.
- Regularly inspect the power cord from the power source to the power supply / relay box for wear or damage. If any wear or damage is found, replace immediately.

There are no settings or adjustments that can be made to the system by the user. Should difficulty be found with the system operation do not remove any of the system covers. This will void the system warranty and may result in an electric shock hazard.

Refer servicing to BRB Systems USA Co.