

# **BRB Systems USA Co.**

## **Instruction Manual**

### **Semi-Wireless Counter Release System**

---

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

---

#### **Table Of Contents**

	Page
(1) Safety Information.....	2
(2) Installation & Set Up.....	3
(3) Operation.....	7
(4) Maintenance.....	10
(5) Counter Codes.....	11
(6) Warranty.....	12

## **(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 components sold as 12V units are to be used with 12V dc power sources only.  
The 12V dc power sources that may be used with the Counter units are; 12V lead acid batteries, 12V regulated ac to dc power supplies and BRB Power Packs.  
The 12V dc power sources that may be used with the Receivers are; 12V lead acid batteries, 12V regulated ac to dc power supplies and 12V dc power directly from the trap.  
12V lead acid batteries (such as car type 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 RX-101 Receivers sold as 120V 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. 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.

- Disconnect this apparatus from its power source during lightning storms or when unused for extended periods of time.
- Use only the attachment parts/accessories supplied by BRB Systems USA Co.
- Do not allow liquid entry into the system components.
- Ensure that the traps are disconnected from their power sources and unloaded before connection of the Counter or Receiver. 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 Counter or Receiver 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. Inadvertent operation of the system may 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.

## **(2) Installation & Set Up**

**Installation** of the Counter should be to the side or rear of the shooting position in such a place as not to obstruct or distract the shooter. The Counter unit should be mounted either to a post, wall or tree and must be mounted vertically without obstruction between the antenna and the trap house.

Each Counter unit is supplied with mounting hardware for the Button Release Holster and Counter enclosure. The Button Release is supplied with 10ft of

cabling and can be mounted a small distance away from the Counter enclosure if desired.

Three (3) hanger bolts, washers and wing nuts are supplied for mounting the Counter enclosure. Once installed these allow for easy removal of the Counter for storage at the end of the day.

To install the hanger bolts, place the Counter enclosure against the surface it is to be mounted to and mark the positions of the 3 mounting holes through the box flanges. Drill the appropriate size holes in the 3 marked positions. Using 2 wrenches, lock the 2 nuts (supplied) against each other on the machine thread of the hanger bolt. Using a wrench, turn the wood thread into the mounting surface, using the 2 locked nuts, until only the machine thread can be seen. Unlock the 2 nuts from each other and remove them from the bolt. When all are installed there will be 3 studs protruding from the mounting surface. Slide the Counter enclosure over the studs and fit the wing nuts.

To use the cabling as supplied, each RX-101 Receiver should be mounted vertically and within 10ft of the power and release connections of the trap. To lengthen the power/release cabling use a connector that is rated for outdoor use and meets current electrical standards. Ideally the Receiver antenna should have an unobstructed line of sight to the Counter antenna.

To make the Receiver connections to your traps use the appropriate plug for the trap. These parts can be purchased from your trap manufacturer or dealer. Release plug and socket wiring diagrams for your trap can be obtained from your trap manufacturer or dealer.

### Counter Unit Connections

#### Battery Power

6ft long 2 core cable with alligator clips or crimp ends = Counter power.

Connect to battery.

Red = 12V +ve.

Black = 12V -ve.

#### BRB Power Pack

6ft long cable with 3 pin plug = Power. Plug into BRB battery pack.

## Single Trap Receiver Connections

### Power From Trap

10ft long 4 core cable = Receiver power and trap release connections.

Red 12V +ve.

Black = 12V -ve.

White and Green = trap release connections.

Orientation of wires is not important.

### Power From 120Vac Wall Outlet

10ft 120V ac power cord = Receiver power.

Plug into GFCI protected 120V outlet.

10ft 2 core cable = trap release connections.

Orientation of wires is not important.

## 2 Trap Receiver Connections

### Power From Trap

10ft long 4 core cable = Receiver power and trap release connections.

Red 12V +ve.

Black = 12V -ve.

White and Green = trap release connections Trap A.

Orientation of wires is not important.

2 pin socket and plug = trap release connections Trap B.

Orientation of wires is not important.

Make solder connection of customer supplied cable into plug from Trap B.

### Power From 120Vac Wall Outlet

10ft 120V ac power cord = Receiver power.

Plug into GFCI protected 120V outlet.

10ft 2 core cable = trap release connections Trap A.

Orientation of wires is not important.

2 pin socket and plug = trap release connections Trap B.

Orientation of wires is not important.

Make solder connection of customer supplied cable into plug from Trap B.

## **Set Up**

For ease of customer set up, before shipping BRB Systems USA Co. presets a unique Field frequency setting of the Counter and Receiver units.

Therefore under normal circumstances, set up of individual Counters and Receivers should not be necessary by the customer. However if a change in Field frequency is required then follow the instructions below.

The Field frequency, of the transmitter within the Counter and the Receiver units, must match for the equipment to release a target. Frequency is set with dip switches within the Counter and Receiver units.

The Receiver relay closed time can also be set within the Receiver for fast or slow loading traps.

### **Counter Dip Switches**

To access the dip switches remove the Counter from its power source and disconnect from the trap.

Remove the 6 screws from the front cover of the enclosure.

Carefully remove the cover so as not to pull the internal wiring that links between the cover and the enclosure body.

The transmitter pcb is identified by the 3 dip switches on its surface. The upper dip switch SW1 sets the frequency. Dip switches SW2 and SW3 are unused.

Changing a dip switch setting is best done with a small blunt object such as a precision screwdriver.

Before refitting the cover inspect the seal for damage and that it has not fallen from its groove.

### **Receiver Dip Switches**

To access the dip switches remove the Receiver from its power source and disconnect from the trap.

Remove the 4 screws and lift off the cover.

The left hand dip switch SW3 sets the frequency. The center dip switch SW2 sets the relay closed time. SW1 is not used.

Changing a dip switch setting is best done with a small blunt object such as a precision screwdriver.

Before refitting the cover inspect the seal for damage and that it has not fallen from its groove.

### Counter and Receiver Dip Switch Settings

- Counter SW1 = Field frequency. Switches 2 through 8 set the frequency. 128 variations. Switch 1 must match that on the Receiver, but does not affect frequency.
- Counter SW2 = Unused.
- Counter SW3 = Unused.
  
- Receiver SW1 = Unused.
- Receiver SW2 = Relay closed time. All switches OFF = 0.25 seconds. Any of the 8 positions ON = 0.8 seconds.
- Receiver SW3 = Field frequency. Switches 2 through 8 set the frequency. 128 variations. Switch 1 must match that on the Counter, but does not affect frequency.

Trap identities are fixed. TRAP1 on the Receiver always responds to Counter button 1 and TRAP2 always responds to Counter button 2.

## **(3) Operation**

### Dongles

To release a target using the BRB Wired Counter a Dongle must be inserted into the counter socket. If the Dongle is set to Count Up Mode, then the shooter may release 10,000 individual targets before the count will need to be reset. If the Dongle is set to Count Down Mode then then the club will program the required number of individual targets into the Dongle using the clubhouse Console. Any amount between 0 and 999 can be programmed.

Either, insert the Dongle into the socket of the Counter and press ON/OFF, or press ON/OFF and then insert the Dongle into the socket. If the ON/OFF

button is pressed while there is no Dongle present the display will read 'Idle' until the Dongle is inserted. If no Dongle is inserted within 10 seconds then the Counter will return to sleep.

Once the Dongle has been inserted and the unit is powered on, the unit will not power down until the Dongle is removed. Once the Dongle has been removed the display will read 'Idle' and wait for another Dongle for 10 seconds. If none is inserted after 10 seconds the unit will return to sleep.

If a Dongle with the wrong ground ID is inserted then the Counter Code 'Err 3' will be displayed until the Dongle is removed and no target can be released.

### Count/Credit

With a Dongle inserted and the power ON, the display will show the count stored in the Dongle. If the Dongle is set to Count Up Mode then the display will read between 0 and 10,000 and will be displayed as follows:

1234

When the display reads in this manner, the Counter is in Count Up Mode, has released 1234 targets with this Dongle and has a maximum of (10,000 -1234 =) 8766 remaining.

Count Down Mode can be distinguished as follows:

.9.8.7

When the display reads in this manner, the Counter is in Count Down Mode and has a 987 target credit. In Count Down Mode when the count reaches zero no more targets can be released until more count is added to the Dongle using the clubhouse Console. If a target is attempted to be released with zero credit on a Dongle the user will hear an audible 'beep' to inform them that no credit exists.



## Mode Selection

Selection of which shooting mode is required, Instant Release or Solo Delay, is made by the toggle switch on the front of the Counter.

- Instant Release Mode: Releases all targets immediately upon pressing the required target button.
- Solo Delay Mode: Initiates a 5 second delay with audible 'beeps' down to the first target release. After the first target release there is a 4 second delay before the second target is released.

## Release Targets

Once the shooter has chosen the mode of operation, the Counter has read the Dongle count and established that count/credit remains, then targets can be released. In Instant Release Mode the shooter can release either single targets from traps A and B, or simultaneously release pairs simply by pressing the corresponding button on the button release.

In Solo Delay mode the shooter can release any 2 trap combination: A then A, A then B, B then A, B then B or a True Pair.

## Payment

When shooting is finished the Dongle is removed from the Counter. After 10 seconds without use the Counter will sleep.

The Dongle is returned to the clubhouse for payment.

If all targets were not released in Count Down Mode, the club will be able to see the remaining count once they insert the Dongle into the Console.

If in Count Up Mode the club will be able to see how many targets were released and charge accordingly.

### Receiver LED's

Receiver has Power = 1 continuous green led.

Release Trap A message received = LED immediately to the right of the power LED lights when relay closes. Extinguishes when relay opens.

Release Trap B message received = LED further to the right of the power LED lights when relay closes. Extinguishes when relay opens.

Message received with major errors. Target not released = Red LED lights and extinguishes immediately.

## **(4) Maintenance**

The rugged manufacture of the BRB Wired Counter Release should ensure many years of trouble free use if it is not abused and given simple maintenance.

- Avoid moving any component of the system by pulling it by the cabling.
- Do not allow any component to be immersed in water.
- Regularly inspect the power/trap control cords for 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.

## **(5) Counter Codes**

0= Reverse connections. In and Out are backwards. Tally only.

2 = Insert Dongle. Ground ID change required.

3= Bad ground ID. Dongle is from another ground.

4= Need 4 characters. If less than 4 characters are input into ground ID.

5= Bad Dongle. Dongle is unresponsive.

9 =Programmed as Ground ID Dongle, not a counting Dongle

Immediately cleared.

## **(6) BRB systems USA Co. – Limited Warranty**

This BRB Systems USA Co. product, supplied in the original packaging to the original purchaser, is warranted by BRB Systems USA Co. against manufacturing defects in materials and workmanship for a limited warranty period of

### **One (1) Year Parts and Labor.**

This limited warranty begins on the original date of purchase and is valid only on products purchased and used in the USA. This warranty will terminate automatically prior to its stated expiration if the original purchaser sells or transfers the product to any other party.

BRB Systems USA Co. will repair or replace this product, at our option and at no charge as stipulated herein, with new or reconditioned parts or products if found to be defective during the limited warranty period specified above. All replaced parts and products become the property of BRB Systems USA Co. and must be returned to BRB Systems USA Co. Replacement parts and products assume the remaining original warranty or ninety (90) days, whichever is longer.

This limited warranty covers defects in materials and workmanship encountered in normal use of this product and shall not apply to defects or injuries caused by the following, including, but not limited to: damage which occurs in shipment; delivery and installation; applications and uses for which this product was not intended; product alterations not authorized by BRB Systems USA Co.; cosmetic damage or exterior finish; accidents; neglect; fire; water damage; vermin or insect infestation; lightning or other acts of nature; use of products, equipment systems, utilities, services, supplies, accessories, applications, installations, repairs, external wiring or connectors not supplied or authorized by BRB Systems USA Co. which damage this product or result in service problems; incorrect electrical line voltage; fluctuations and surges; customer adjustments and failure to follow operating instructions, cleaning, maintenance and environmental instructions that are covered and prescribed in the Instruction Manual.

BRB systems USA Co. does not warrant uninterrupted or error-free operation of the product.

BRB Systems USA Co. shall not be liable for loss of revenue or profits, failure to realize savings or other benefits, or any other special, incidental or consequential damages caused by the use, misuse or inability to use this product, regardless of the legal theory on which the claim is based, even if BRB Systems USA Co. has been advised of the possibility of such damages. Nor shall recovery of any kind against BRB Systems USA Co. be greater in amount than the purchase price of the product sold by BRB Systems USA Co. Without limiting the foregoing, the purchaser assumes all risk and liability for loss, damage or injury to purchaser and purchaser's property and to others and their property arising out of the use, misuse or inability to use this product sold by BRB Systems USA Co. not caused directly by the negligence of BRB Systems USA Co.

To receive warranty service contact BRB Systems USA Co. for problem determination and service procedure. If it is determined that the product requires warranty service, ship the product, in its original packaging or its equivalent, together with proof of purchase, prepaid insured to BRB Systems USA Co.

Products repaired or replaced under warranty will be returned to you, within a reasonable time, freight prepaid.

To obtain warranty service contact BRB Systems USA Co. at:

**brbsystemsusa@yahoo.com**

**or call: 412-7732128**