

BLAC-RAC MANUFACTURING INC.

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INSTALLATION & OPERATION INSTRUCTIONS
MODELS: 1070, 1074, 1080M, 1080E, 1091M, & 1091E

SAFETY FIRST!

WARNING!

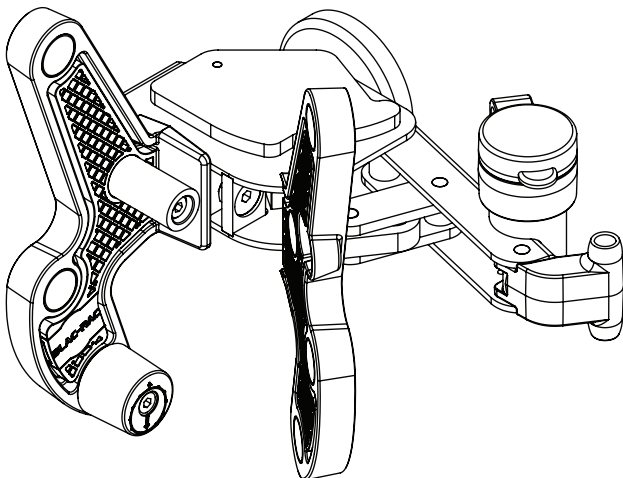
- ⌘ NEVER CHAMBER A ROUND WHILE USING THE BLAC-RAC®
- ⌘ THE BLAC-RAC® WILL NOT PREVENT ACCIDENTAL DISCHARGE/FIRING OF A CHAMBERED ROUND
- ⌘ IF YOUR FIREARM DOES NOT FIT, DO NOT USE THE BLAC-RAC®
- ⌘ IT IS THE RESPONSIBILITY OF THE USER TO OPERATE THE BLAC-RAC® PROPERLY AND SAFELY
- ⌘ MAKE SURE YOUR WEAPON IS CLEAR AND THE SAFETY LEVER IS IN THE “SAFE” POSITION. CONSULT YOUR WEAPONS MANUFACTURER’S SAFETY INSTRUCTIONS BEFORE PROCEEDING WITH INSTALLATION.
- ⌘ METAL TRIGGER COMPONENTS REQUIRED (SEE TRIGGER GUARD SECTION)

THE BLAC-RAC® IS PRIMARILY A GUN MOUNT FOR THE M4/M16/AR15 WEAPONS PLATFORMS. ALTHOUGH, THE BLAC-RAC® IS TRULY A MULTI PLATFORM DEVICE THAT FITS A MULTITUDE OF TODAY'S TACTICAL WEAPONS.

IN ORDER TO FULLY MAXIMIZE THE SECURITY FEATURES OF THE BLAC-RAC® SYSTEM, IT IS STRONGLY RECOMMENDED THAT THE USE OF A METAL, NON-FOLDING, NON DROP DOWN, SEMI PERMANENT TRIGGER GUARD IS INSTALLED. BLAC-RAC® HAS DESIGNED THE IDEAL TRIGGER GUARD THAT WILL PROVIDE THE MAXIMUM LEVEL OF SECURITY FOR YOUR WEAPON. THE BLAC-RAC® ALTA TRIGGER GUARD SHOULD BE INSTALLED IN ACCORDANCE WITH THE PROCEDURE OUTLINED IN THE TRIGGER GUARD SECTION OF THIS MANUAL LOCATED ON PAGE 9.

Congratulations on your purchase of the **BLAC-RAC®** Tactical Weapons Mount. The **BLAC-RAC®** will provide you with years of consistent, reliable service even in the most demanding situations.

These instructions will ensure that the **BLAC-RAC®** will be installed simply and correctly. The **BLAC-RAC®** is shipped fully assembled. Follow the simple instructions contained in this manual and you will have trouble free installation. Also, the numerous mounting positions will provide the user with multiple options to mount the **BLAC-RAC®** even in the most difficult of desired locations.



Important Installation Details

1. Disassembly of the **BLAC-RAC®** in preparation of mounting to the T-Channel/Tube Mounts for all models
2. Removal of security plates to access mounting hardware
3. Mounting of the **BLAC-RAC®** to the T-Channel
4. Attachment of the **BLAC-RAC®** to the “mounting spindle” or the “yoke” as commonly referred to at the factory
5. Adjustment features of the **BLAC-RAC®**
6. Tube Mount assembly and installation
7. Basic operation of the system
8. Electronic wiring and power requirements
9. Installing multiple **BLAC-RAC®**s electronically
10. Conventional Stock Adapter installation
11. Warranty terms

Parts List

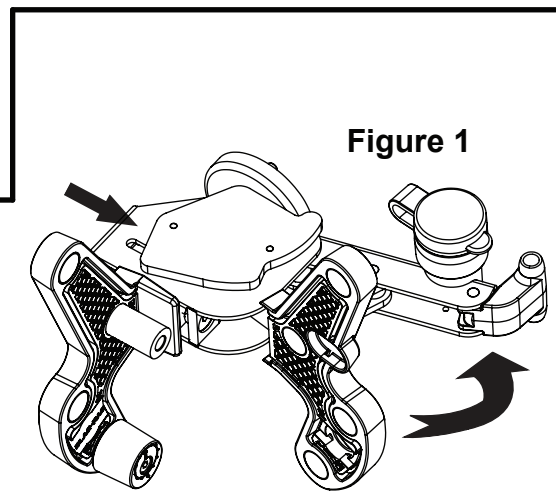
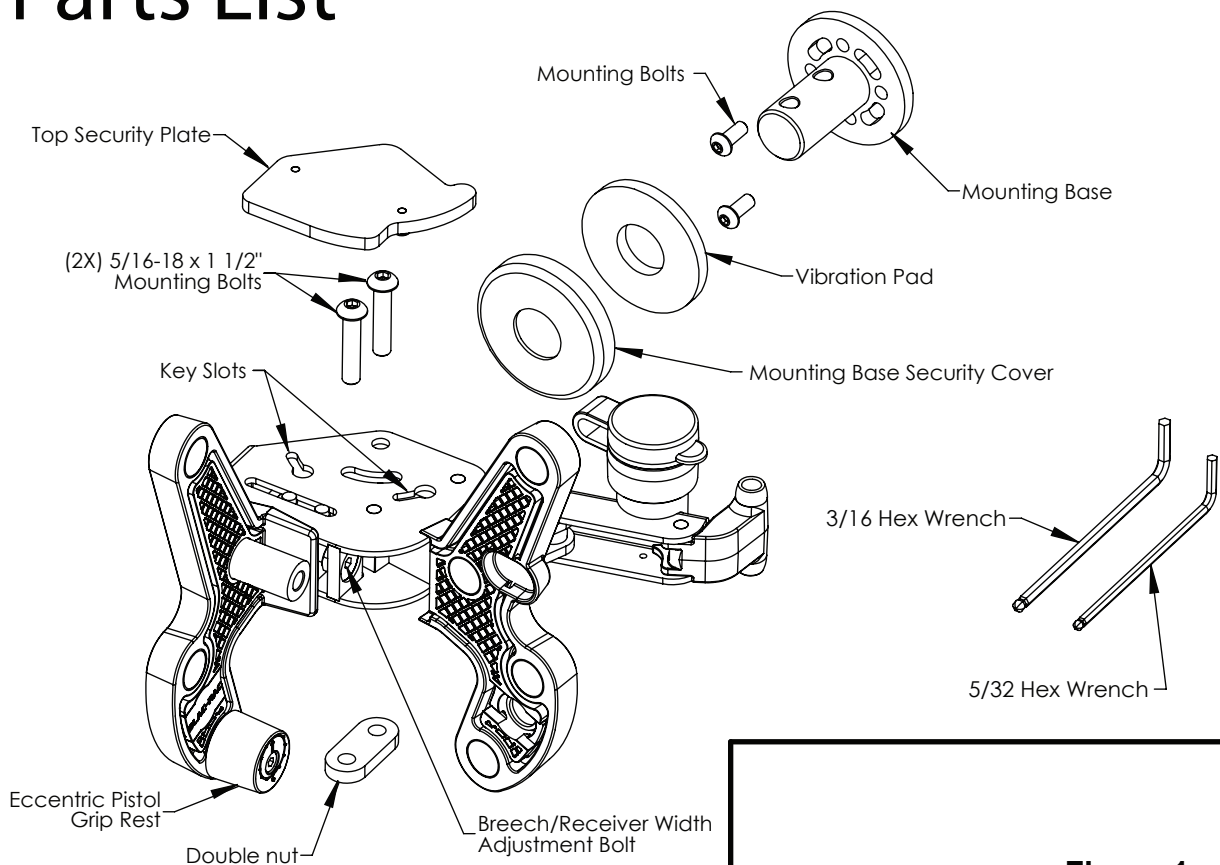


Figure 1

Removal of Top Security Plate (Models 1070 & 1074)

1. Unlock the BLAC-RAC and swing the handle to its full open position (Figure 1)
2. Slide the Top Security Plate, counter clockwise towards the open handle as far as it will go (Figure 1)
3. Lift the Top Security Plate straight up and separate it from the unit (Figure 2)
4. Place the Top Security Plate in an easily accessible location for re-installation .
5. Note the Key Slots on the top side of the frame (Figure 2). These slots are where you will locate the placement when re-installing the Top Security Plate.

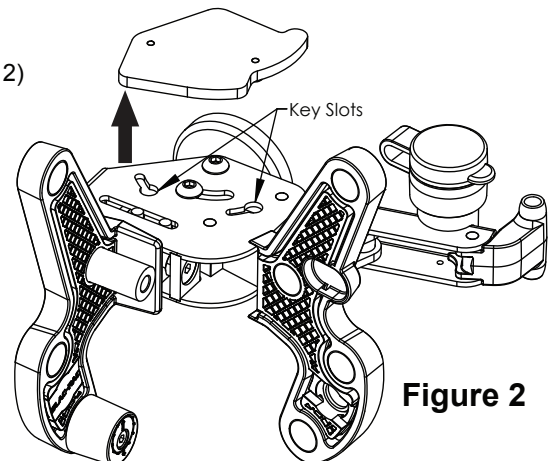


Figure 2

Adjusting/Removing Mounting Spindle

1. Note that one of the Mounting bolts is inserted through an arced slot (Figure 3). This slot allows you to cantor the **BLAC-RAC**® from 90° to 45° positioning.
2. Remove the Mounting Bolts (2X 5/16-18 x 1 1/2") using a 3/16 hex wrench (provided). On the bottom side of the frame, there is a "double nut" that secures the frame to the Mounting Base. As you remove the Mounting Bolts, the Double nut may fall from the unit. Keep an eye out for this as it will be needed for mounting the unit to the Mounting Base
3. Remove the Mounting Base by pulling straight out from the frame. Slip off the Security Cover and the Vibration Plate. Retain for re-installation.

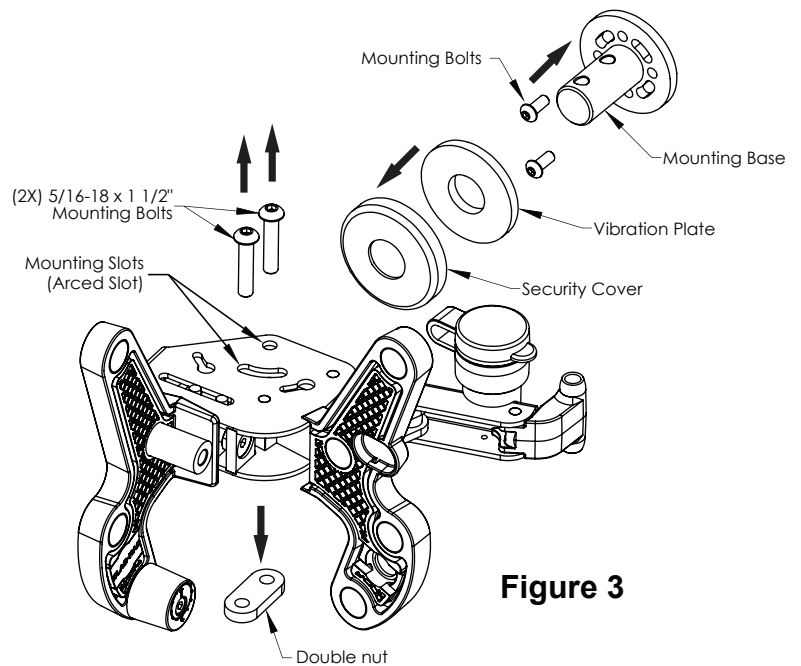


Figure 3

Attaching Spindle Assembly to the T-Channel

1. Using the T-nut (supplied), attach (loosely at first) to the mounting bolts on the Mounting Base and slide them into the slots of the T-Channel. Remember you can orient the Mounting Base 360°. Select the orientation that fits your application.
2. Once the Mounting Base is attached to an appropriate surface and hardware tightened to its final position, slide the round security plate over the Mounting Base.
3. Slide the frame over the Mounting Base and install the two mounting bolts and Double nut. Adjust orientation (45° thru 90°). Tighten bolts.
4. With the **BLAC-RAC**® in the open position (Figure 2), attach the Top Security Plate to the top of the frame. The Top Security Plate is placed over and through the "keyslots" on the top of the frame, and then slid to the left as far as it will go.

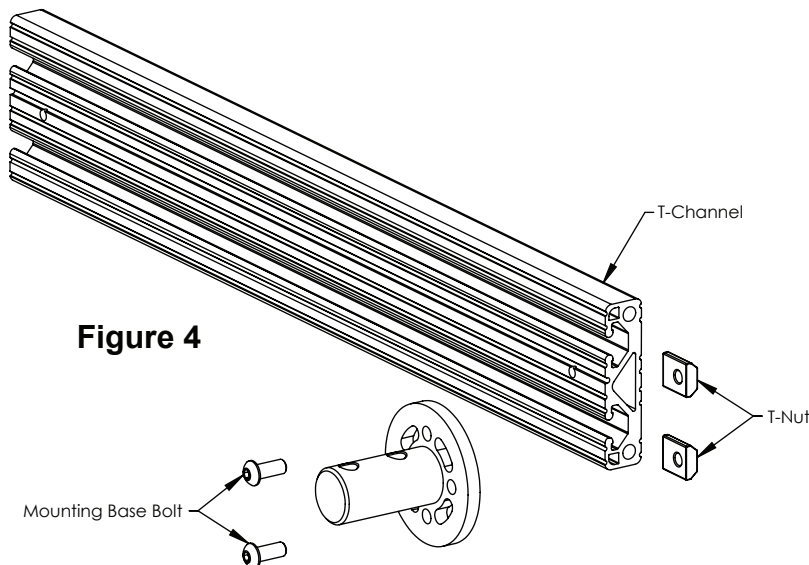


Figure 4

! CAUTION!

IT IS THE RESPONSIBILITY OF THE USER TO PROPERLY MOUNT AND SECURE THE BLAC-RAC TO AN APPROPRIATE SURFACE, MEANING IT IS NECESSARY FOR THE USER TO DETERMINE AND MAKE A JUDGEMENT ON THE SURFACE TYPE, MATERIAL, MOUNTING HARDWARE AND LOAD CONDITIONS TO ENSURE THE PRODUCT WILL OPERATE NORMALLY. BLAC-RAC MANUFACTURING INC. ACCEPTS NO LIABILITY OF ANY KIND OR EXTENDS ANY WARRANTY OF ANY TYPE TO USER DEFINED AND USER INSTALLED MOUNTING SCHEMES OR MATERIALS USED IN MOUNTING THE PRODUCT TO ANY SURFACE WHETHER STATIONARY OR MOBILE.

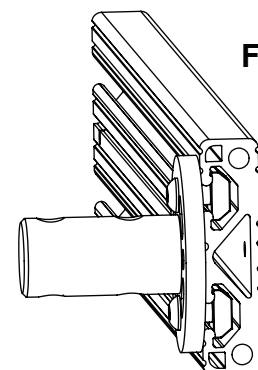


Figure 5

Breech Adjustment

The Breech Adjustment is used to adjust the width and/or pressure of the **BLAC-RAC**[®], depending on the receiver width of the firearm being secured. The **BLAC-RAC**[®] will accommodate most weapon's platforms in use by Law Enforcement today.

1. In the open position, place your firearm into the grip pad as shown (Figure 6)
2. Close the swivel pivot pad using the handle until it engages the firearm. The clamping action of the **BLAC-RAC**[®] should be **VERY SNUG** for maximum security and stability. Continue to adjust the breech adjustment until the firearm does not move or shift in the device. If the clamping action is too loose or tight, or does not engage the firearm, remove the firearm and adjust the bolt on the inside of the frame as shown (Figure 7).

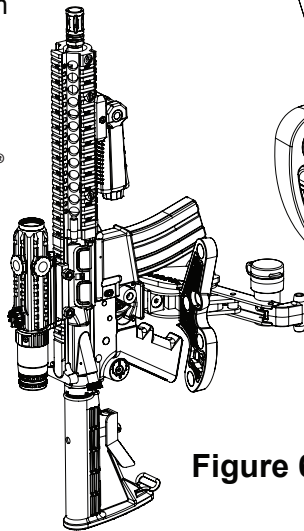


Figure 6

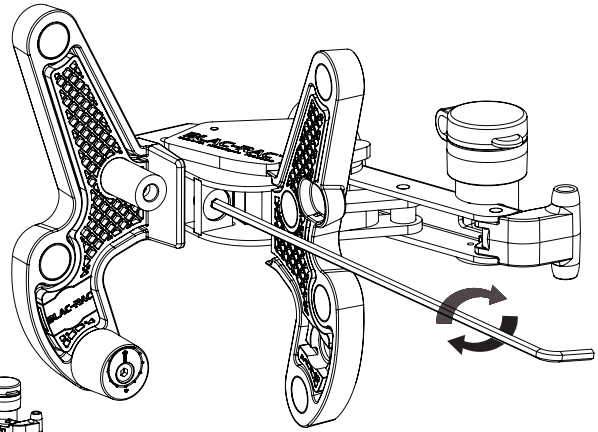
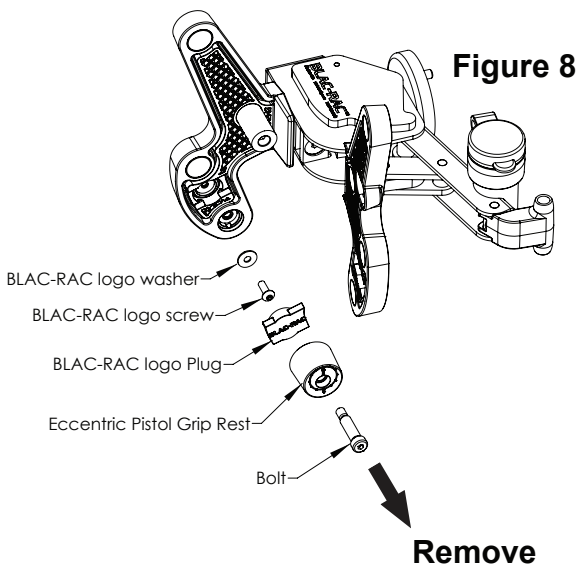


Figure 7

Conventional Stock Adapter (CSA) (This procedure is not required for shotguns equipped with pistol grip stocks)



Remove

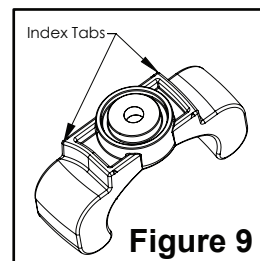
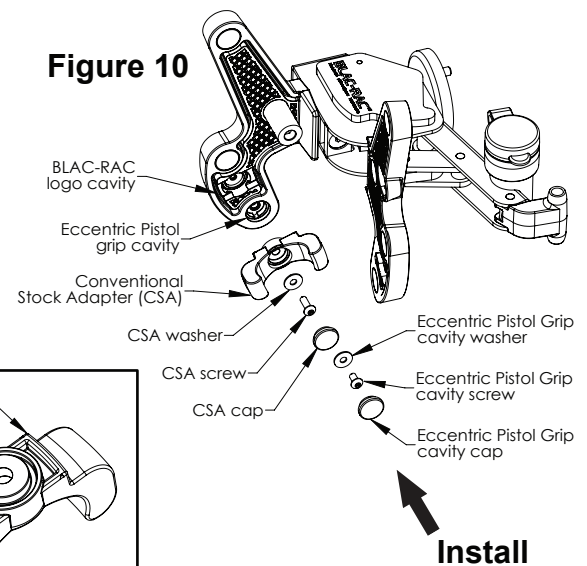


Figure 9



Install

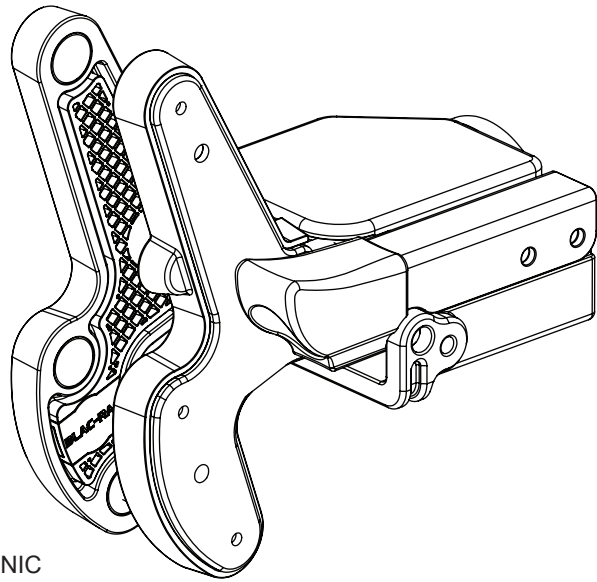
1. Remove the small plug marked with **BLAC-RAC**[®] and the Eccentric Pistol Grip Rest (Figure 8)
2. Remove screw and washer from behind the **BLAC-RAC**[®] marked plug (Figure 8)
3. Place the Conventional Stock Adapter (CSA) in the cavity left by the **BLAC-RAC**[®] marked plug, using the "index" tabs for proper fit (Figure 9)
4. Using the kit provided, install the washer and screw into the CSA. Insert CSA Rubber Cap (Figure 10)
5. Install the EXTRA screw, washer, and rubber cap into the Eccentric Pistol Grip Rest cavity (Figure 10)
6. Place your conventional stock shotgun into the fixed pad with the CSA installed
7. Make adjustments to the Breech Adjustment bolt to change the width of the clamping action to accommodate the shotgun

MODELS: 1080E, 1080M, 1091E, & 1091M

MODELS 1080E, 1080M & 1091 EXTREME DUTY ARE THE ELECTRONIC AND MECHANICAL VERSIONS OF THE **BLAC-RAC**® WITH A VERTICAL HANDLE OPERATION. THESE MODELS MOUNT AND GRIP THE WEAPON IN THE SAME MANNER AS OUR STANDARD 1070/1074 MODELS WITH TWO MAJOR DIFFERENCES.

FIRST, THE VERTICAL HANDLE OPERATION REDUCES THE PITCH (CENTER -TO-CENTER) TO ONLY 5.0" (INCHES) VS. THE 9.0" REQUIRED FOR THE 1070/1074 MODELS. TWO 1080/1091 SERIES WILL FIT BETWEEN THE FRONT SEATS OF ALL CURRENT AND NEW LAW ENFORCEMENT VEHICLES.

SECOND, THE 1080/1091 MODELS ARE AVAILABLE IN BOTH ELECTRONIC RELEASE AND MANUAL OPERATION. THE ELECTRONIC VERSIONS (E TYPE) FEATURE ELECTRONIC RELEASE WITH TIME DELAY AND KEY OVERRIDE. BOTH "E" TYPE VERSIONS ARE DESIGNED WITH A MICROPROCESSOR TO CONTROL THE TIMING (8 SECONDS) AND MONITOR THE SOLENOID, PREVENTING OVER HEATING AND POTENTIAL FAILURE.



Step One:

To access the mounting hardware, the top security cover must be removed. The **BLAC-RAC**® needs to be unlocked and the handle fully opened as shown below (Figure 11). At this stage, there is no power to the electronic release. Use the manual key override and unlock the handle to open.

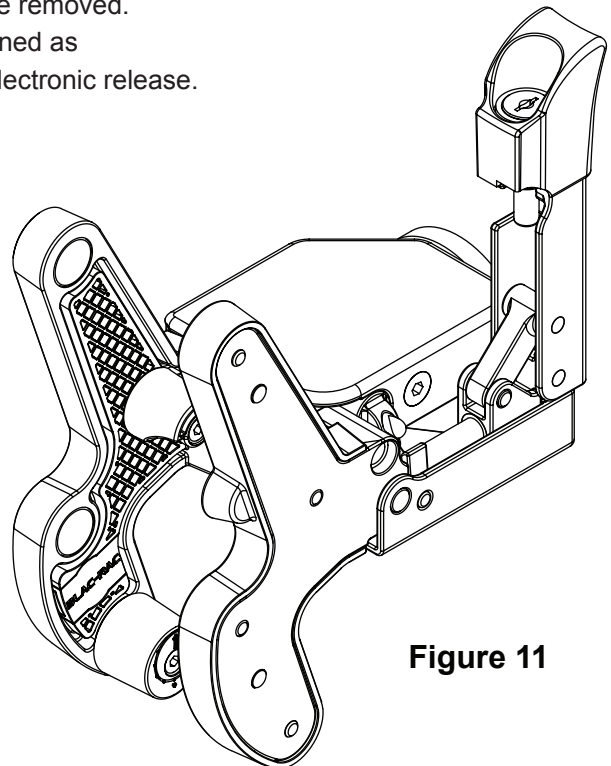
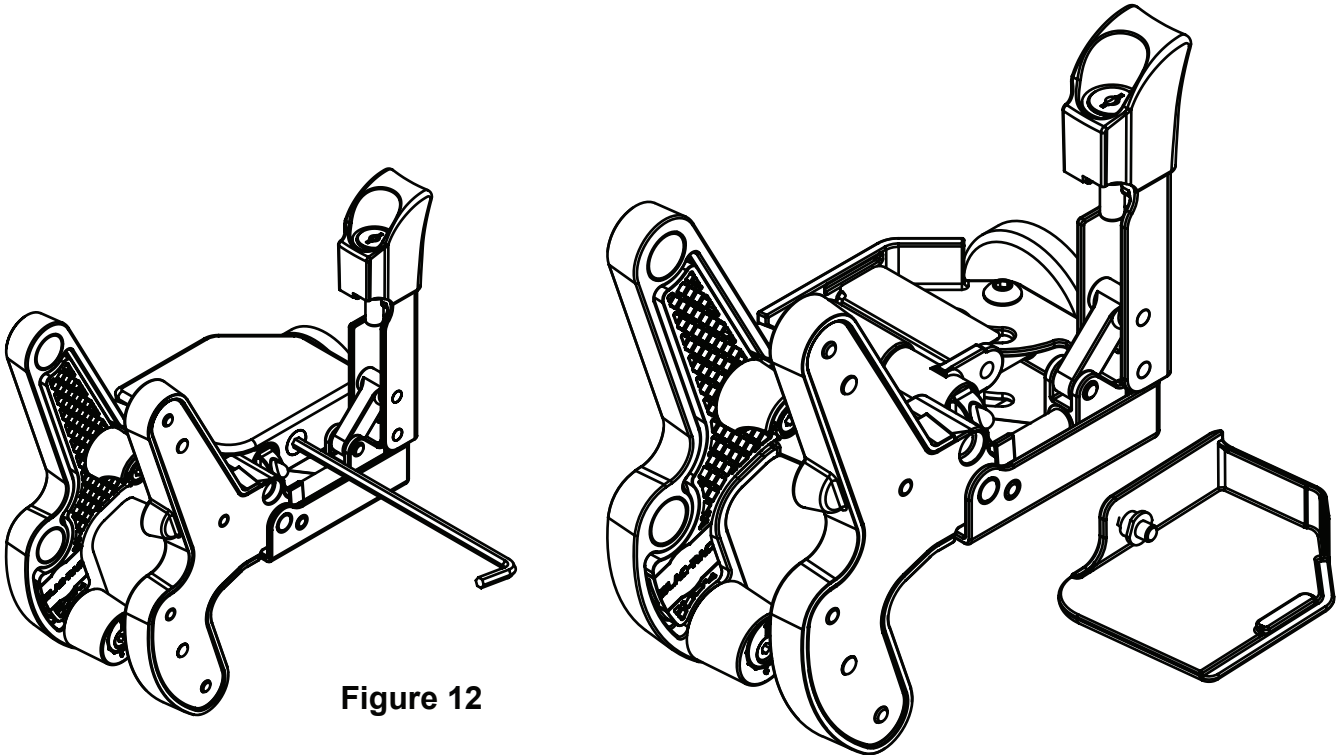


Figure 11

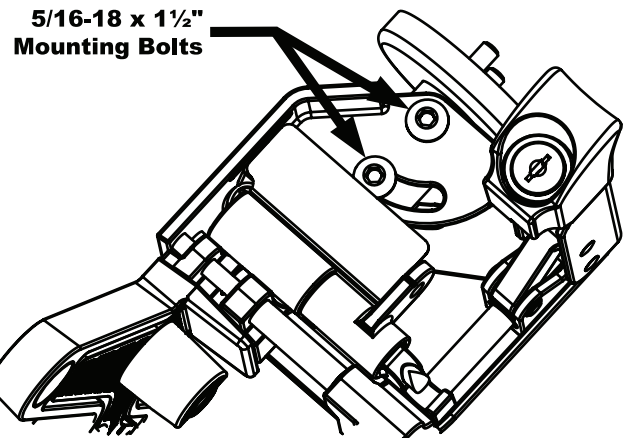
Step Two:

There is a Flat Head 1/4 - 20 x 9/16 Screw holding the top security cover in place. Using a 5/32" Hex key wrench (provided), loosen screw completely (Figure 12). Please note that the screw will not disengage and be removed. There is a retaining nut on the inside of the cover for ease of removing and re-installing the cover.



Step Three:

Using a 3/16" hex key wrench (provided), remove the two 5/16-18 x 1 1/2" mounting bolts (Figure 13). This will separate the **BLAC-RAC**® frame from the Mounting Base. Please refer to the 1070 Instructions for mounting the Mounting Base to the T-Channel (1070/1074 Page 2).



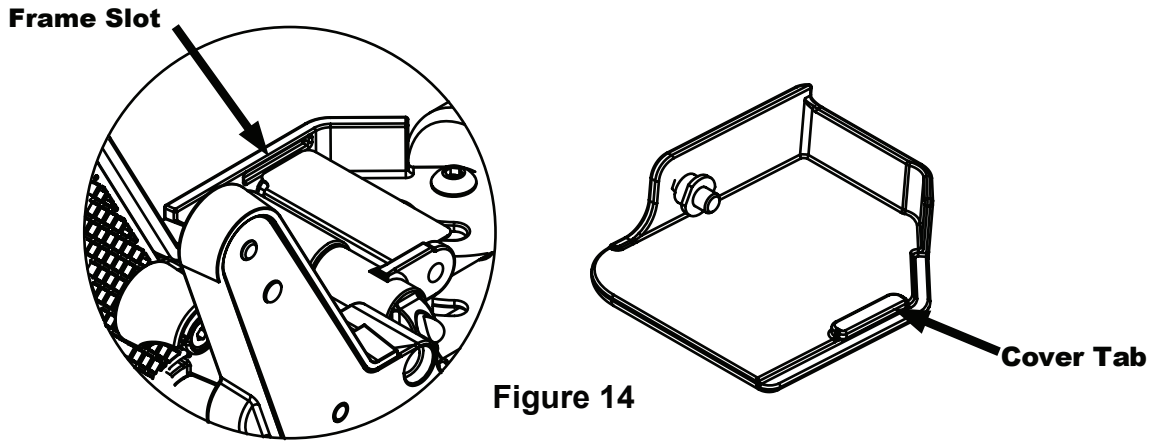
Step Four:

After installing the Mounting Base to the T-Channel, attach the **BLAC-RAC**® frame to the Mounting base using the same two 5/16-18 x 1 1/2" bolts & double nut. Tighten to 15 to 20 foot pounds. You have 90 degree to 45 degree offset positioning capability when mounting the frame to the Mounting Base. Position the **BLAC-RAC**® in the desired position.

Figure 13

Step Five:

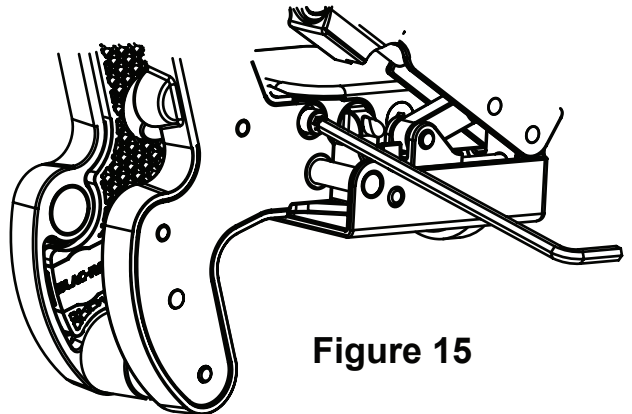
Re-attach the top security cover making sure that the tab of the cover is fully engaged into the slot of the frame (Figure 14). It is only necessary to “hand” (snug) tighten the cover screw. It cannot be accessed when the **BLAC-RAC**® is closed and locked.



After the top is attached and the **BLAC-RAC**® tightened and secured to the T-Channel, the **BLAC-RAC**® can be wired for electronic operation.

Breech Width Adjustment:

All **BLAC-RAC**® models come equipped with Receiver Width Adjustment capability. On the Model 1080/1090 the adjustment feature is located as shown (Figure 15).



Step 6 - Electrical Wiring:



IMPORTANT

The unit must be wired in exact adherence to these instructions. Failure to properly wire the unit, including the required 3.1 Amp Slow Blow Fuse will cause the unit to malfunction. Wiring incorrectly will void the warranty.

We desire a successful installation process for you and will provide technical assistance anytime. If you should have any questions regarding the wiring procedure, please contact **BLAC-RAC**® Manufacturing Inc. directly at 1.800.528.8040.

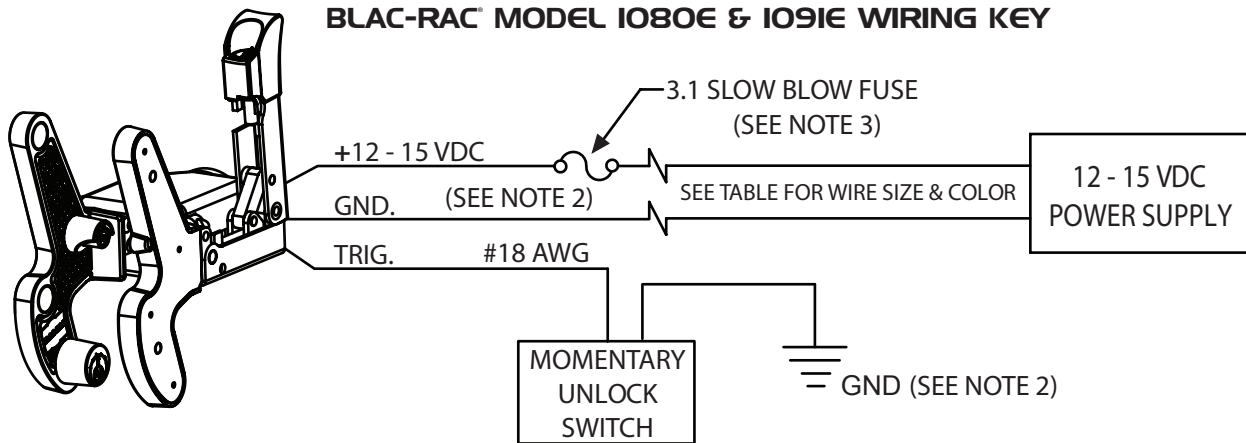
⚠ IMPORTANT

The BLAC-RAC® electrical series operates on a 12VDC power source. At initial activation, applying power to the unit via direct or indirect source (i.e, discreet momentary switch), powered through a control box, wired directly to the battery or igniton switch, the unit will cycle one time for its 8 second timing cycle and then return to the locked position. This ensures that the BLAC-RAC® is functioning normally.

The unit is equipped with a 3.15 Amp Slow Blow fuse with a time delay of 600ms. We provide this fuse in the cable assembly; Littlefuse P/N 04773.15MXP, description; 500VAC/400VDC TL 3.15AMPS, size; 5mm x 20mm. A single unit requires a maximum 10 amps for 300ms. To activate two electrical units simultaneously, it would be necessary to have a power circuit capable of providing 20AMPS and so on.

BLAC-RAC® does not provide a momentary switch. It is up to the end user to define the switch that fits thier individual requirements. The electrical rating of a momentary switch we have supplied upon request is rated at 3AMPS at 125VAC SPST Momentary.

BLAC-RAC® MODEL IO80E & IO9IE WIRING KEY



GROUND (-)	POWER (+)	TRIGGER
BLACK	RED	GREEN

WIRE LENGTH	WIRE SIZE POWER	WIRE SIZE TRIG.
8 ft.	#18 AWG	#18 AWG
13 ft.	#16 AWG	
20 ft.	#14 AWG	

- NOTES:
- FOR PROPER OPERATION, THE SOURCE RESISTANCE BETWEEN THE BLAC-RAC AND THE POWER SOURCE SHOULD NOT EXCEED 0.1 Ohms
 - PROPER WIRING PROCEDURES REQUIRE A CLEAN GROUND, AND USE OF AN EXTERNAL STAR WASHER TO ENSURE METAL TO METAL CONTACT FOR PAINTED OR PLATED SURFACES.
 - FUSE CAN BE PURCHASED DIRECTLY FROM **BLAC-RAC® Manufacturing Inc.** (No fuse other than the one described can be used)

⚠ CAUTION!

If the Green Trigger wire will not be used, it is **HIGHLY** reccomended that it be disabled and completely insulated from any possible electrical conductive surface

⚠ IMPORTANT!

If you wish to connect to 120VAC power, you must convert the 120VAC to 12VDC. Consult your local electrician to configure the equipment and to ensure that you have the proper wiring requirements necessary for your desired electrical installation.

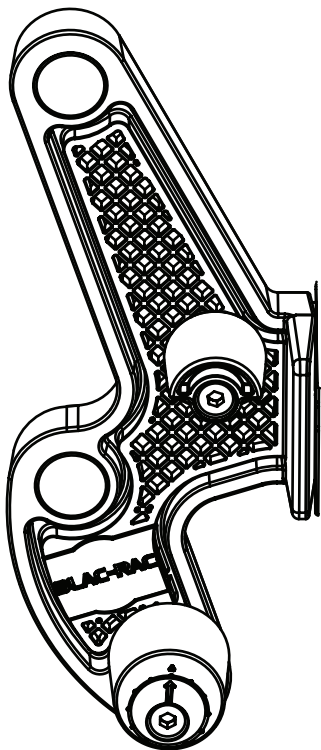
The 3.15 AMP Slow Blow fuse must remain installed on the power wire extending from the BLAC-RAC®

Eccentric Pistol Grip Rest

All **BLAC-RAC**® models come equipped with the Eccentric Pistol Grip Rest. This feature provides greater flexibility for positioning the weapon in the **BLAC-RAC**® when using third party grip sets that differ from the standard mil-spec grips that come from many manufacturers of M4's & AR15 equivalents.

The function of the Eccentric Pistol Grip Rest is the ability to adjust the "length of pull" from trigger guard to the back of the pistol grip. This useful functionality allows your customized weapon to always "sit" properly within the rack.

The Eccentric Pistol Grip Rest is shown below



In this picture, the grip rest is set to the shortest length of pull. The arrow is facing up to the trigger post and the thickest portion of the outer diameter is up towards the trigger post.



Note that on the mil-spec grips, the arrow is facing up with the thinnest part of the outer diameter facing up towards the trigger post.



When using large size, third party grip sets, the eccentric pistol grip rest should be adjusted with the arrow facing down, for maximum length of pull distance.

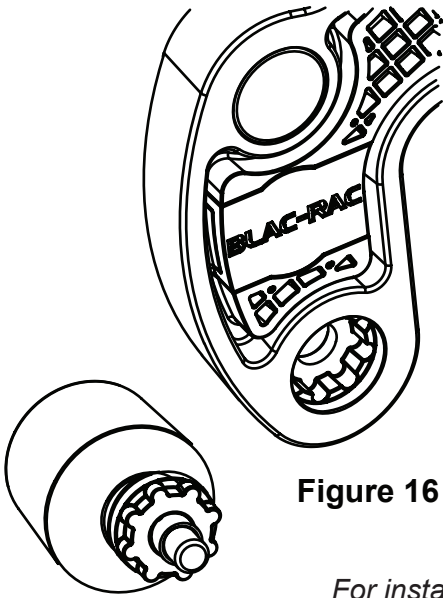


Figure 16

The Eccentric Pistol Grip Rest is field adjustable. In most cases, it only requires adjusting the outer diameter by hand. If you need to modify the arrow direction, use the 5/32" Hex key wrench provided and remove the grip rest. Reposition it where desired. Please note the "star" pattern for location of the grip rest into the pads.

For installation of the conventional stock adapter, see Model 1070/1074 instructions

Trigger Guards:

IN ORDER TO FULLY MAXIMIZE THE SECURITY FEATURES OF THE BLAC-RAC® SYSTEM, IT IS STRONGLY RECOMMENDED THAT THE USE OF A METAL NON-FOLDING, NON DROP DOWN, SEMI PERMANENT TRIGGER GUARD IS INSTALLED. BLAC-RAC® HAS DESIGNED THE IDEAL TRIGGER GUARD THAT WILL PROVIDE THE MAXIMUM LEVEL OF SECURITY FOR YOUR WEAPON.

The **BLAC-RAC® ALTA™** trigger guard replacement is necessary and allows the user to enjoy all the benefits of the **BLAC-RAC®** system while significantly improving the security of the system.

Below are the steps required to ensure your weapon is safe and secure in the **BLAC-RAC®**.



WARNING!

BEFORE STARTING, MAKE SURE THE WEAPON IS UNLOADED, THE CHAMBER IS EMPTY AND THE SAFETY ENGAGED.

ALWAYS OBSERVE SAFE FIREARM HANDLING AT ALL TIMES.

Tools Required:

- 1/8" Punch
- Small Hammer
- Drill Motor
- No. 30 (.128") Drill Bit
- ALTA™ Trigger Guard Kit



1. Remove current trigger guard

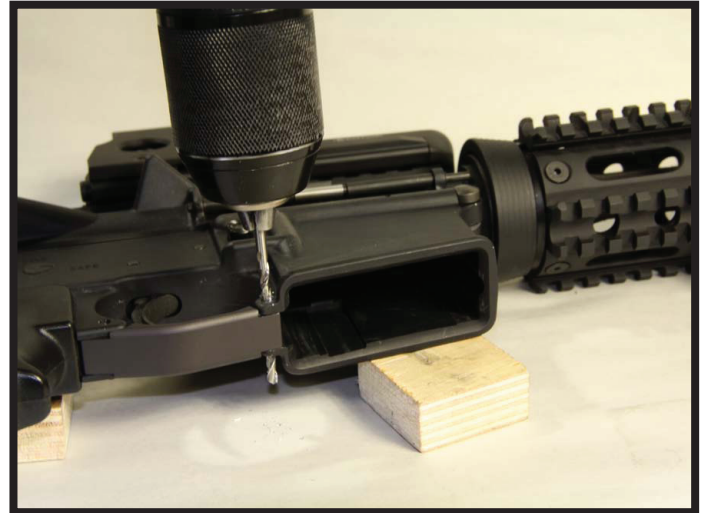
Using a 1/8" Punch, depress the front detentspring and rotate the trigger guard down, clear of the receiver. Using the same Punch, drive out the rear roll pin and completely remove the trigger guard. Retain the roll pin for use in the re-installation of the replacement trigger guard.



2. Install Replacement Trigger Guard

While supporting the underside of the trigger guard, carefully drive in the rear roll pin using the 1/8" Punch. Verify that the hole alignment is correct before proceeding.

Align front hole of trigger guard with the existing hole in the receiver. Using a No. 30 Drill bit, (.128" Diameter), drill through the entire trigger guard hole until the drill bit passes through the bottom side of the receiver creating holes on both top and bottom of the receiver. Make sure the trigger guard holes align. This will ensure a straight hole from top to bottom.



While supporting the underside of the trigger guard, carefully drive in the front roll pin using the 1/8" Punch. Verify that the hole alignment is correct before proceeding. Roll pin should be equally flush on both sides of the weapon



Maintenance : Models 1070/1074

The **BLAC-RAC**® requires periodic maintenance and cleaning just as your firearm does. We recommend using a light gun oil with a Teflon additive, and a dust free applicator to lube the moving components of the **BLAC-RAC**®. Apply liberally, as the Manganese Phosphate Coating absorbs the oils. This will keep your 1070/1074 **BLAC-RAC**® working properly for a lifetime



ONE YEAR LIMITED NEW PRODUCT WARRANTY

BLAC-RAC® Manufacturing Inc. will repair or replace, at its expense, and at its option, any new **BLAC-RAC**® Model 1070 or 1080 which in normal use has proven to be defective in workmanship or material, provided the customer returns the product prepaid to a **BLAC-RAC**® Manufacturing Inc. factory location with proof of purchase of product within one year from date of purchase. This warranty is valid for the original purchaser and is not transferable. **BLAC-RAC**® Manufacturing Inc. will not be responsible for any asserted defect which has resulted from negligent use, misuse, abuse or repair or alteration made by anyone other than authorized representative of **BLAC-RAC**® Manufacturing Inc. Under no circumstances will **BLAC-RAC**® Manufacturing Inc. be liable for incidental or consequential damages resulting from normal use or defective products. This warranty is **BLAC-RAC**® Manufacturing Inc. sole warranty and sets forth the customer's exclusive remedy, with respect to defective products; all other warranties express or implied whether of merchantability, fitness for purpose, or otherwise, are expressly disclaimed by **BLAC-RAC**® Manufacturing Inc.

If you should have any questions or comments, please contact us at

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