E-BOLT CUSTOM INSTALLATION SETTING & TUNING INSTRUCTIONS

TIPPMANN
PNEUMATICS, INC.

You will need:
1 - E-BOLT Kit
1 - 9 Volt Battery

WARNING: ***DO NOT field strip or otherwise disassemble this gun while it is pressurized with gas.***
Disassembling the receiver while under gas pressure will cause personal injury &/or damage to the gun.
Remove CO^2 cylinder or CO^2 cartridge before doing any disassembly.

Step 1 Set up a table with plenty of space to work.

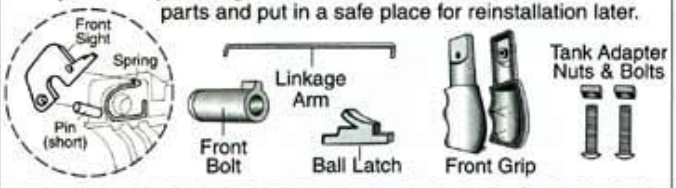
You will need a 1/8" allen wrench, a crescent wrench, a 7/16" wrench, regular pliers, long nose pliers, hammer, punch, and a small flathead screwdriver.

When reassembling, replace these 2 receiver bolts with 2 new battery cover bolts in kit.

Disassemble the gun:

1. **Remove CO^2 Tank & barrel and have gun in uncocked position.**
2. Remove 2 tank adapter screws.
3. Remove all 6 receiver bolts holding gun together.
   Note: At reassembly, longest bolt goes in front grip.
4. Separate the two halves of the gun.

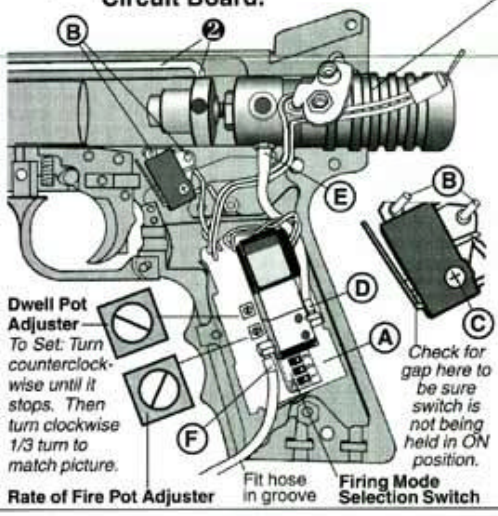
Step 2 Prepare right receiver half: Lift out the following parts and put in a safe place for reinstallation later.



The following parts will not be reinstalled

Step 3 Remove valve. Install new gas line (with loctite). Wipe excess loctite and reinstall valve/new gas line in gun.

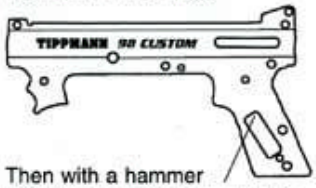
Step 4 Insert Electronic Valve and Circuit Board.



1. Insert new Electronic Valve into right receiver half with the gas nipple barb (E) fitting facing down.
2. Insert linkage arm into front bolt and Elect onic Valve.
3. Place Circuit Board (A) into right receiver as shown. Mount the Trigger Switch on 2 Upper Sear Pins (B). (NOTE: Trigger switch may need adjustment to keep it from being held in the ON position by the trigger. To make this adjustment, loosen screw (C) and turn the switch body to the right until the switch is not forced to the ON position by the trigger *before the trigger is pulled.* Hold in place & tighten screw.
4. Connect one end of the 1/16" air line to the fitting on the circuit board at (D). Measure and cut the hose length just long enough to connect on the Electronic Valve nipple fitting at (E).
5. Connect one end of the remaining air line to the fitting on the circuit board at (F). (Final hose end connects in Step 8.6).

Step 5 Prepare Left Receiver Half for installation.

Remove rectangular plate from left receiver half. To do so, remove left grip and place left receiver half outside up, with area containing knockout plate flush on a flat surface.



Then with a hammer and punch, start in one corner of the plate and carefully tap it loose by working your way around the plate edge until it is removed.

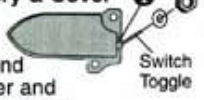
Step 6 Put receiver halves back together.

Make sure to place remaining internal parts back into the receiver half the way they were when you took the gun apart. Check to make sure the front sight, sight pin & sight spring, ball latch, front bolt, linkage arm and rear sight are in position and trigger parts are in place. Insert two tank adapter nuts into right receiver half. Mold battery connection wires to fit in groove in Electronic Valve.

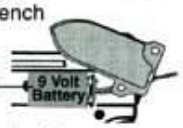
As you replace the left receiver half, thread battery switch and connector through bolt slot. Align low pressure gas line to fit into groove in bottom of receiver. Then being careful to keep battery wires and low pressure line in grooves, fit the left receiver halves together until halves almost touch (a small gap is normal and will draw up when reinstalling receiver bolts.) Insert front grip and attach with longest bolt. Insert 3 regular receiver bolts. Final 2 *new* receiver (battery cover) bolts in kit will hold battery cover in place and be installed after battery is attached. Attach barrel.

Do not replace left receiver grip until after all setting & tuning is complete.

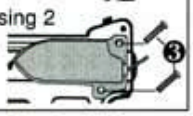
Step 7 Install Battery & Cover



1. Remove nut and washer from switch, insert toggle through end of cover, put on washer and hand tighten nut. With wrench turn nut 1 full revolution (Do not over tighten nut.)



2. Connect 9 volt battery and position.



3. Align cover & attach using 2 new cover/receiver bolts. (Do not over tighten and break battery cover.)

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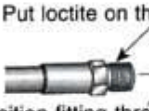
Step 8 Install Low Pressure Regulator, and hook up Low Pressure Hose.

NOTE: Do not overtighten and damage parts.

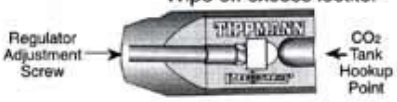
1. Attach Dovetail Mounting Bracket to bottom of grip with 2 tank adapter bolts. (Position set screw towards front of gun).

2. Put loctite on threads of Gas Line and screw 90 degree fitting onto it.



Position fitting threads angled toward bottom of grip. Wipe off excess loctite.

3. Put loctite on threads of the 90 degree fitting and screw Regulator onto it with gas line positioned towards regulator adjustment screw as shown. Wipe off excess loctite.

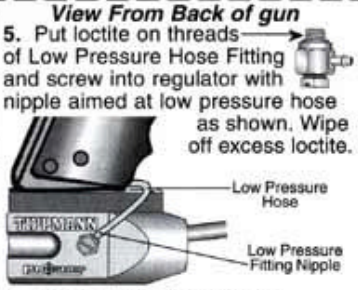


4. Loosen mounting set screw and slide regulator into bracket until right ends are flush.

Tighten mounting set screw to lock regulator in place.

View From Back of gun

5. Put loctite on threads of Low Pressure Hose Fitting and screw into regulator with nipple aimed at low pressure hose as shown. Wipe off excess loctite.



6. Attach Low Pressure Hose:
- Measure low pressure hose to easily fit all the way onto Low Pressure Fitting Nipple and cut to length.
- Insert hose all the way onto nipple.

Step 9 Setting and Tuning the Velocity

Tune the gun with Firing Mode set to S-SEMI AUTO

1. First adjust the velocity screw located on the side of your gun out until it is flush with the receiver.

2. Attach air supply to gun. Then screw your Low Pressure Regulator (LPR) set screw in (clockwise) until you hear a faint hiss coming from your grip - Then back off the LPR (counter-clockwise) until hissing stops.

3. On the electronic board are 2 pot adjusters. The top one is the Dwell Adjuster. To Set: Turn counterclock-wise until it stops. Then turn clockwise 1/3 turn to match picture.

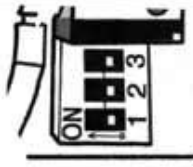
4. Chronograph your gun. It will most likely be shooting over 300 Feet Per Second (FPS). If gun is shooting over 300 FPS, slowly turn down (clockwise) your LPR until you have reached the FPS you desire. If FPS is too low, increase LPR input pressure (counterclockwise) until 300-310 fps is reached.

5. Finally, set velocity screw to desired velocity.

Step 10 Setting & Tuning the Rate of Fire

The electronic board has two pot adjusters. The top one is the Dwell (DWL) and the lower one is the Rate Of Fire (ROF) Adjustment. To increase firing speed - turn bottom ROF adjuster clockwise. To decrease firing speed - turn bottom ROF adjuster counterclockwise. NOTE: If you increase your rate of fire to fast, it will fire faster than your hopper can feed paintballs and you will break a lot of paint in the breach.

Step 11 Firing Mode Selection



Firing Mode Setting Switch is located on circuit board.

S – SEMI AUTO: One trigger Pull = One shot

F – FULL AUTO: Gun will continuously fire until you release the trigger.

3 – SHOT BURST: One trigger Pull = 3 shots

R – RESPONSE: Fires the gun on the pull of the trigger and on the release, *unless you pull and hold the trigger for 1/2 second*, then it will only fire one shot.

T – TURBO: This mode starts out as semi until you pull the trigger faster than 5 times a second. Gun then switches to the response mode. As soon as you slow down your trigger pull to less than 5 per second, gun returns to semi mode.

6 – 6 SHOT BURST: One trigger Pull = 6 shots

Step 12 Finish Installation

Replace left grip with 2 grip screws.

IMPORTANT INFORMATION

MAINTENANCE: Lubricating your system is very easy. Put 5 drops of oil into tank adapter before you screw in your tank. Then gas up your gun and shoot it 10-20 times. This will blow oil through the whole internal valve system.

BATTERY: Use a standard 9 volt battery. It is good practice to carry a spare battery.

POWER: Nitrogen or compressed air is highly recommended, CO_2 is not recommended, but may be used. If CO_2 is used, an antisiphon tube and/or expansion chamber should be used to help keep the liquid CO_2 out of the system.

TROUBLESHOOTING GUIDE

VELOCITY TOO HIGH OR TOO LOW: Review the tuning procedure instructions. NOTE: Keep the dwell as low as possible and the LPR as high as possible while achieving your desired velocity.

BALL BREAKAGE: If you are breaking paintballs in the breach it is likely that you are out shooting your hopper. Decrease your rate of fire by turning the Rate Of Fire adjuster (counterclockwise).

LEAKING GAS FROM GRIP FRAME AREA:
- Inspect low pressure lines and fittings for proper seal and/or damage. Replace as needed.
- When battery gets weak, your valve will not close properly allowing gas to leak. Replace battery.

ELECTRONICS DO NOT WORK:
- Bad batteries. Replace with new.
- Broken wires or detached components on board. Call Tippmann.
- Electronic Valve has a bad coil. Send to PB Sports or call Tippmann.
- Electronic board has shorted out due to wires contacting with the metal. Call Tippmann.

WARRANTY AND REPAIR POLICY

Tippmann Pneumatics, Inc. is dedicated to providing you with the ultimate quality support in the use of your product. Tippmann Pneumatics, Inc. warrants that this product is found free from defects in materials and workmanship for a period of 1 year from the original date of purchase by the initial owner/purchaser. On claims submitted as outlined, Tippmann Pneumatics, Inc. will repair or replace, without charge, any kit components that have failed through defect in material or workmanship.

In the event warranty or other non-warranty related repairs are required, send the product(s) to Tippmann Pneumatics, Inc. We strive to complete the necessary repair work within 24 hours and return it to you via regular ground UPS.

For assistance with warranty and repair call 1-800-533-4831.

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