

**OPERATING
INSTRUCTIONS
FOR PNEUMATIC
AND CO₂ FIRED
PROJECTORS**

Model 178B
*Model 176B
Model 190B
*Model 179B

*Discontinued



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pneudart inc

Please read this owner's manual carefully before operating your projector. This manual contains valuable information to ensure that your equipment operates at its optimum level.

Feel free to contact us or visit our Web site for tips, more information, and further assistance.

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****ATTENTION****

CO₂ systems which rely upon internal pin valves, similar to those found within **Pneu-Dart Models 176B and 179B**, are designed to permit CO₂ gas to expand when exposed to the atmosphere. The rate of expansion is directly related to ambient temperature. i.e. cooler temperatures (<50° F) yield slower expansion rates thereby reducing the effective muzzle velocity. To combat this phenomenon, the use of hand warmers affixed to the valve housing and/or limiting the exposure of the projector to cooler temperatures is highly recommended. **NOTE: These Models have been discontinued.**

Owner's Manual For Pneumatic and CO₂ Fired Projectors

**READ ALL INSTRUCTIONS AND WARNINGS IN THIS MANUAL
BEFORE USING DART PROJECTOR**



WARNING: NOT A TOY. RECOMMENDED FOR ADULT USE ONLY. MISUSE OR CARELESS USE MAY CAUSE SERIOUS INJURY OR DEATH. DANGEROUS WITHIN 250 YARDS (230 METERS). YOU AND OTHERS WITH YOU SHOULD ALWAYS WEAR EYE PROTECTION TO PROTECT YOUR EYES. READ ALL INSTRUCTIONS BEFORE USING. BUYER AND USER HAVE THE DUTY TO OBEY ALL LAWS THE USE AND OWNERSHIP OF THIS PROJECTOR.

STEPS FOR SAFE SHOOTING: Never allow others to use or inspect your projector without first instructing them in the fundamentals of safe use. For everyone's protection, stress keeping the muzzle pointed in a safe direction at all times. Inform them of any other common sense rules of safety, which the situation may require.

STEP 1. Learn the Parts of Your New Projector

STEP 2. Operating the Safety

STEP 3. Charging Your Projector

STEP 4. Adjusting Velocity

STEP 5. Loading and Unloading Darts

STEP 6. Aiming and Firing

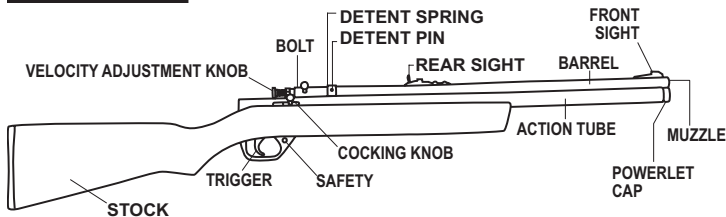
STEP 7. Maintaining Your Projector

STEP 8. Reviewing Safety

STEP 1. LEARNING THE PARTS OF YOUR NEW PROJECTOR

Learning the names of the parts of your new projector will help you understand your owner's manual. Use this manual to increase your knowledge of the projector.

MODEL 176B

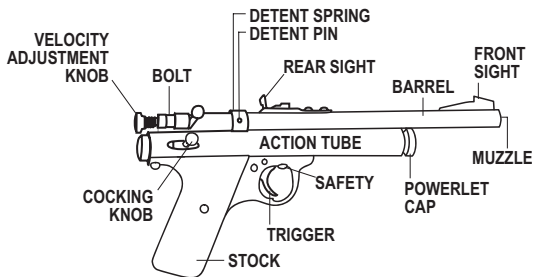


Model 176B Specifications

- Stock and Action - Benjamin Sheridan
- Overall Length - 41"
- Dart Barrel - .50 cal. Smooth Bore
- Sights - Open
- Weight - 7 lbs.
- Range - 2 feet to 40 yards with 1cc Type 'P' Disposable RDDs
- CO₂ Pressure Control — Knurled knob on rear of bolt

The Model 176B has been discontinued and is no longer being manufactured.

MODEL 179B

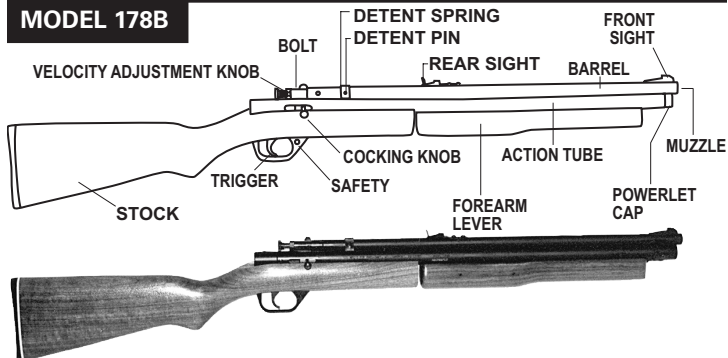


Model 179B Specifications

- Stock and Action - Benjamin Sheridan
- Overall Length - 13 1/2"
- Dart Barrel - .50 cal. Smooth Bore
- Sights - Open
- Weight - 3 lbs.
- Range - 3 to 30 yards with 1cc Type 'P' Disposable RDDs controlled by gas release valve located at rear of bolt.

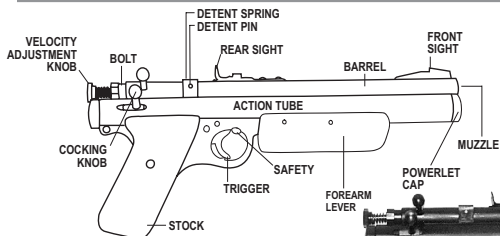
The Model 176B has been discontinued and is no longer being manufactured.

MODEL 178B



Model 178B Specifications

- Stock and Action - Benjamin Sheridan
- Overall Length - 41"
- Dart Barrel - .50 cal. Smooth Bore
- Sights - Open
- Weight - 7 lbs.
- Range - 5 to 40 yards with 1cc Type 'P' Disposable RDDs controlled by number of pumps and power control on rear of bolt.
Min. 1 pump, Max. 10 pumps.



MODEL 190B



Model 190B Specifications top of next page

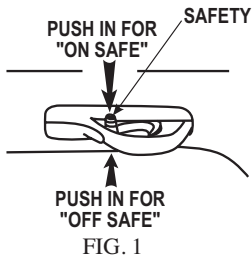
Model 190B Specifications

- Stock and Action - Benjamin Sheridan
- Overall Length - 13 1/2"
- Dart Barrel - .50 cal. Smooth Bore
- Sights - Open
- Weight - 3 lbs.
- Range - 5 to 50 feet with 1cc Type 'P' Disposable RDDs controlled by number of strokes when pumping air into gun and knurled control on valve on bolt. Min. 3 pumps, Max. 8 pumps.

Step 2. OPERATING THE SAFETY

A. To put the projector "ON SAFE":

- Locate the safety directly in front of the trigger.
- Push the safety from the left side all the way in. (Fig. 1).
- The safety is not on unless it is pushed all the way in and the red ring around the safety is not showing. The projector will not fire when "On Safe." Even when the safety is "On Safe", you should continue to handle the projector safely. Do not ever point the projector at any person. Do not ever point the projector at anything you do not intend to shoot.



B. To Take The Dart Projector "OFF SAFE":

- Push the safety from the right side all the way in.
- The projector is ready to fire when "off safe." When you can see the red ring around the safety, the dart projector is "Off Safe" and can be fired.

⚠ WARNING: KEEP THE PROJECTOR IN THE "ON SAFE" POSITION UNTIL YOU ARE ACTUALLY READY TO SHOOT. THEN PUSH THE SAFETY TO THE "OFF SAFE" POSITION.

Step 3. CHARGING YOUR PROJECTOR

Models 176B & 179B

⚠ WARNING: KEEP HANDS AND FACE AWAY FROM ESCAPING CO₂ GAS. IT CAN CAUSE FROSTBITE IF ALLOWED TO COME IN CONTACT WITH SKIN. ALWAYS MAKE SURE CO₂ CYLINDER IS EMPTY BEFORE ATTEMPTING TO REMOVE IT FROM THE PROJECTOR BY SLOWLY TURNING THE POWERLET CAP COUNTER-CLOCKWISE ALL THE WAY UNTIL YOU NO LONGER HEAR THE ESCAPE OF CO₂ GAS.

A. Installing a CO₂ cylinder (See FIG. 2)

- Put the projector "on safe." (See Step 2A)
- Insert a new CO₂ cylinder with the small end into the action tube first.
- Replace the filler cap assembly in the action tube and **HAND TIGHTEN.**
- Prior to use, please dry fire your projector 2 times once a new powerlet has been installed

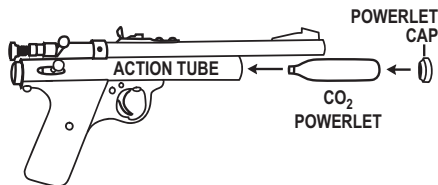


FIG. 2

B. Removing Power Sources

- Put projector "On Safe." (See Step 2A)
- For CO₂ cylinders, slowly turn the filler cap assembly counter-clockwise until you no longer hear the gas escape. Completely unscrew the filler cap assembly from the action tube and remove the empty CO₂ cylinder.

NOTE: Never try to force any CO₂ cylinder into or out of place; it may result in injury to you or damage to your projector. Do

not store your RDD projector with a full CO₂ cylinder installed. Removing partially filled cylinders before storage can prolong the longevity of your projector.

⚠ WARNING: CO₂ CYLINDERS MAY EXPLODE AT TEMPERATURES ABOVE 120° F (48.9° C). DO NOT MUTILATE OR INCINERATE THEM. DO NOT EXPOSE THEM TO HEAT OR STORE CO₂ CYLINDERS AT TEMPERATURES ABOVE 120° F (48.9° C).

Models 178B & 190B

Hold the projector almost against your chest with the muzzle pointed straight up. Raise the forearm lever to full length of stroke and push down smartly USING THE HEEL OF THE HAND. Always pump with full, even strokes to ensure consistent velocity. Hesitate for a second at the top of each stroke to ensure that the intake hole is wide open. RECOMMENDED MINIMUM CHARGE IS THREE PUMPS. MAXIMUM IS TEN PUMPS.

STEP 4. VELOCITY ADJUSTMENT (MODELS 176B, 178B, 179B, & 190B)

The muzzle velocity of the dart can be reduced by turning the adjustment knob on the rear of the bolt to restrict a portion of or the entire porthole on the bottom of the bolt. You will need to experiment with different combinations of practice darts and the adjustment knob settings to obtain the desired RDD velocity for your application.

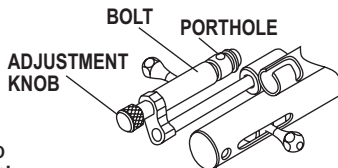


FIG. 3

⚠ WARNING: USE EXTREME CAUTION WHEN HANDLING DARTS.

STEP 5. LOADING AND UNLOADING DARTS

Loading and Unloading RDDs (darts)

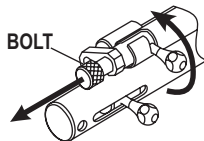


FIG. 4

A. Loading RDDs

- Make sure the projector is “On Safe” (See Step 2A).
- Point the projector in a SAFE DIRECTION.
- Open bolt by rotating bolt handle up, pulling all the way back and then rotating over to the left side of the projector.
- Place one RDD into the loadingport (breach)
- Lightly push the RDD into the barrel by closing and locking the bolt handle in the down position. DO NOT jam the bolt forward. This will damage your projector .
- Be sure bolt is closed before firing. If it is not closed and fully locked, the dart may not be discharged.

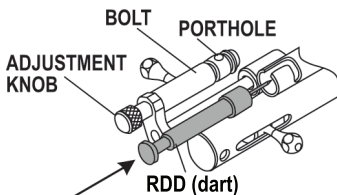


FIG. 5

B. Unloading RDDs

- Put the projector “on safe” (See Step 2A)
- RDDs not fired should be removed from the projector before storing.
- RDDs can be removed by opening bolt (See Step 5A), holding muzzle up, and releasing the detent by pushing on detent spring on the side opposite the brass detent pin with left thumb, as shown in Fig. 6, until the RDD is released. RDDs equipped with flight stabilizers must be pushed out of the barrel from the breech to the muzzle.

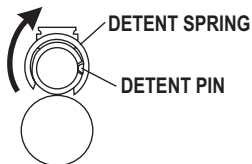


FIG. 6



WARNING: DO NOT LEAVE RDDS IN PROJECTOR FOR A LONG PERIOD OF TIME. INJECTABLE LIQUIDS MAY LEAK OUT AND CORRODE THE DART AND BARREL.

Step 6. AIMING AND FIRING SAFETY

A. Aiming and Firing the projector

- You and others with you should always wear shooting glasses to protect your eyes. Cock the projector by hooking index finger over cocking knob and pulling rearward approximately 3/4 inches until the trigger sear engages on the second click and the bolt stays back.
- Always aim your projector in a SAFE DIRECTION. When you are sure of your target and backstop, and the area around the target is clear, take the projector "Off Safe" (See Step 2B) and squeeze the trigger to fire.
- Do not shoot at hard surfaces or at the surface of water. The dart may bounce off or ricochet and hit someone or something you had not intended to hit.
- Always choose your target carefully. THINK about what you will hit if you miss the target.

B. Sight Adjustment

- The front sight should be set for the point of impact of the average shooting distance. Because of the differences among users, it is not possible to sight-in projectors at the factory.
- To change lateral point of impact, (left and right) the blade pulls over to the side on which the forward round head screw is being tightened. BE SURE TO LOOSEN OPPOSITE SCREW FIRST.

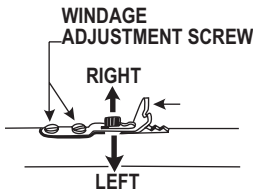


FIG. 7

To sight in, you move the rear sight in the same direction you desire the point of impact to move.

- Move the rear sight ramp forward or backward to lower and raise the point of impact.

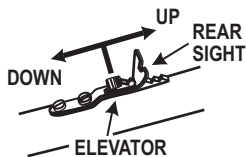


FIG. 8

Step 7. MAINTAINING YOUR PROJECTOR

IMPORTANT: Before you attempt to clean your projector, always make sure it is "On Safe" (See Step 2A), the CO₂ cylinder is removed and you have checked the barrel to make sure there are no RDDs left in it (See Step 5B).

- Your projector will work best if you oil it every 250 shots. Put a drop of Crosman #0241 Lubricating Oil directly on the tip of the CO₂ cylinder before inserting. Do not over-oil as this can cause damage to your projector. DO NOT use gun oil or any other oil, which contains solvents. Both the barrel and tube are made of a rust resistant, metal alloy and require no special treatment.
- Other external metal surfaces should be wiped with a lightly oiled cloth after each use.
- If the accuracy of your projector falls off, run a firm but free fitting patch through the barrel. Be sure to use a cleaning rod of the proper size that will not damage the barrel.
- Tampering with the projector or attempts to change the projector in any way may make it unsafe to use and will void the warranty.
- If you drop your projector, check to see that it works properly before you use it again. If anything seems changed, like a shorter or weaker trigger pull, this may mean worn out or broken parts. Call Customer Service for assistance before using your projector again.

Step 8. REVIEWING SAFETY

- Do not ever point the projector at any person. Do not ever point the projector at anything you do not intend to shoot. Always keep the muzzle of the projector pointed in a SAFE DIRECTION.
- Always treat the projector as though it is loaded and with the same respect you would a firearm.
- Always keep the projector “On Safe” until you are ready to shoot in a SAFE DIRECTION.
- Always check to see if the projector is “On Safe” and unloaded when getting it from another person or from storage.
- Always keep your finger off the trigger and out of the trigger guard until ready to shoot.
- You and others with you should always wear shooting glasses to protect your eyes.
- Use only RDDs made for this projector.
- Keep hands away from escaping CO₂ gas. It can cause frostbite if allowed to come in contact with skin.
- Be careful if you shoot near hard surfaces or the surface of water. The RDD may bounce off or ricochet and hit someone or something you had not intended to hit.
- When target shooting, replace the backstop if it becomes worn. Place the backstop in a location that will be safe should the backstop fail.
- Do not attempt to disassemble or tamper with your projector. Use an Authorized Service Station or return it to the factory for repair.
- Do not put the projector away loaded (See Step 5B) or charged with CO₂. (See Step 3A) Always store this projector in a secure location.

PERFORMANCE

Many factors affect velocity, including brand of projectile, type of projectile, and amount of gas in cylinders, lubrication, barrel condition and temperature.

REPAIR SERVICE

If your projector needs repair, we recommend that you take or send it to an Authorized Service Station. For an authorized service station near you, visit our web site at www.pneudart.com or call customer service at 1-570-323-2710. International customers should contact their respective distributor. Your projector requires special tools and fixtures to repair it. If you take it apart, you probably will not be able to reassemble it correctly. Pneu-Dart assumes no warranty responsibility under such circumstances.

IMPLIED WARRANTIES

ANY IMPLIED WARRANTIES, INCLUDING THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE, ARE LIMITED IN DURATION TO ONE YEAR FROM DATE OF RETAIL PURCHASE. SOME STATES DO NOT ALLOW LIMITATIONS ON HOW LONG AN IMPLIED WARRANTY LASTS, SO THE ABOVE LIMITATIONS MAY NOT APPLY TO YOU.

To the extent any provision of this warranty is prohibited by federal, state, or municipal law, which cannot be preempted, it shall not be applicable. This warranty gives you specific legal rights, and you may also have other rights, which vary from state to state and country to country.



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