

## Introduction

Congratulations on your purchase of the "**SuperNova**" manufactured by AirStar. The **SuperNova** is a complete out-of-the-box ready to shoot **tournament class marker**. It is the newest and most revolutionary paintball marker ever produced. Using design concepts and proven technologies from industry, the **SuperNova** will set the standard for years to come in paintball design, reliability, durability, operation and maintenance. Before leaving the factory your **SuperNova** was thoroughly Quality Checked and inspected for proper manufacturing specifications and assembly. What makes the "**SuperNova**" so revolutionary? It is the first totally pneumatic marker ever produced. There is no **bolt**, no **hammer**, no **sear**, no **3-way valve**, no **ram**, no **connecting rod**, no **trigger linkage** and no **backblock**, which adds up to no more headaches. How can that be? The answer is: The **Articulated Barrel System (ABS)** and **spool valve** assembly combination. The heart of the **SuperNova** located in the main body is a sophisticated **spool valve** assembly that pressurizes, releases and repressurizes the marker instantaneously by pneumatic (air) pressure. With sophisticated equipment used to drill precision ports in the spool, differential pressures from these ports direct the air pressure to perform various functions including moving the barrel forward to open the **breach** area allowing the ball to drop and be picked up by the barrel as it moves rearward. The **spool valve** has been used in every aspect of industry for many years. They are highly reliable, durable, efficient and eliminate several mechanical functions found in the firing mechanism of all other existing paintball markers. Everything on a **spool valve** is **centerline** and **symmetrical**. That means no wear or tear on internal parts, greater gas efficiency, reliability and long life. With fewer moving parts you can begin to see the tremendous advantage of **reduced maintenance and technical skill required operating and maintaining your marker**. The **SuperNova** works on **ultra-low** pressure of **95 PSI**. That's operating and shooting pressure. What are the advantages of **ultra-low pressure**? **Fewer ball breaks, reduced O-ring fatigue, higher differential pressure transfer to the valve producing extremely fast fill rates, dramatically reduced shutdown, greater accuracy, less freeze-up and one of the most noticeable differences, a greater number of shots per bottle.**

## Warranty Statement

AirStar warrants to the original purchaser that this product is free from defects in material and workmanship under normal use and service for a period of one year from the original date of purchase by the owner/purchaser. **Customer must return the enclosed warranty registration card along with a copy of the purchase receipt within fifteen days of purchase.**

AirStar agrees to repair or replace (at its discretion) any product within a reasonable period of time provided that it is returned with postage prepaid to AirStar. This warranty does not cover normal wear and tear of parts, scratches, O-rings, aftermarket products or damage to the unit as a result of aftermarket parts. This warranty shall not apply if it is shown by AirStar that the defect or malfunction was caused as a result of misuse by the consumer. This warranty covers only original factory parts. Any modification or tampering of original factory parts will not be covered by this warranty.

For warranty service: Send unit **prepaid**, along with a brief description of the problem and **a copy of your warranty registration** to:

AirStar  
23211 Del Lago Dr. Unit B  
Laguna Hills, CA. 92653  
Ph. # 949-855-3278

MAKE A COPY OF THE WARRANTY REGISTRATION, FILL BOTH OUT AND MAIL ONE TO AirStar. KEEP THE OTHER FOR YOUR RECORDS.

## Safety

**THIS PAINTBALL MARKER IS NOT A TOY** and should always be treated with respect. Safety is the number one rule for playing paintball. You as the owner of a paintball marker are a representative of the entire sport. Let everyone know by your example that paintball is **FUN** and **SAFE**. Read carefully below the Do's, Don'ts and basic rules of Paintball.

**DO NOT pressurize this marker until you have read this manual.**

**DO NOT shoot at animals or property.**

**DO NOT shoot opponents who are closer than 20 feet (6 meters)**

**DO NOT shoot at or toward individuals not wearing approved eye and head protection.**

**DO NOT fire any object (s) except .68 caliber paintballs.**

**DO NOT disassemble this marker while it is pressurized.**

**DO NOT store this marker while pressurized**

**DO NOT look down the barrel of the marker or any marker unless it is disassembled.**

**DO NOT put your finger in the barrel or breach and shoot. (it moves)**

**DO NOT use any power source except CO2 or compressed air.**

### **DO'S**

**Handle this marker as if it is always ready to fire.**

**Consider the marker loaded and ready to shoot at all times.**

**Always point the marker in a safe direction.**

**Consider a shooting ball dangerous up to 250 yards.**

**Always check velocity before each use.**

**Always remove the CO2 or HP air bottle from the marker and dry fire in a safe direction before disassembling.**

**Learn and follow the rules of the field where you are playing.**

**Always keep the muzzle plug in the marker when not firing or in use.**

### **GOLDEN RULES**

**#1 RULE Never look down the barrel of an assembled marker.**

**#2 RULE Never stick your finger or any object into the breach area or the end of the barrel when the SuperNova is pressurized. The barrel moves in both directions and can cause injury.**

## Marker Components

### **-Power Source**

Your SuperNova is suitable to accept HPA or CO2. Make sure the HPA is regulated to a maximum of 900 PSI before going into the marker. AirStar recommends the use of an anti-siphon tank and/or remote system for maximum performance when using CO2.

### **-Barrel Assembly**

When removing or changing barrels it is very important to:

1. Attach/reattach the barrel spring retainer in the exact position on the barrel.(reinforced area)
2. Do not overtighten the set screws on the barrel spring retainer. This will damage the barrel. The barrel spring retainer should be replaced and tighten on the reinforced area of the barrel.

### **-Built-In Relief Valve**

Your SuperNova comes equipped with a built-in relief valve. When the SuperNova pressurizes to over 150 PSI on the low-pressure side the relief valve engages and releases pressure. This is recognizable by a hissing sound coming from a small slot between the body housing and trigger housing. **DO NOT BE ALARMED.** This is normal and will not affect the operation of the unit.

### **-Trigger/Trigger Guard**

The SuperNova is equipped with an adjustable pneumatic trigger. The adjustment set screw is located in the trigger, horizontal to the trigger housing. For shortest pull, adjust

screw through trigger until marker will not fire and then reverse screw back until it does fire. Then check to make sure safety is operational.

"Short stroking" the trigger will result in failure to load correctly, ball breaks and inconsistent velocity. As with every marker, getting used to the trigger pull requires practice and "getting used to". The trigger pull is approximately 1/8 of an inch with 2.5 pounds of force. **If the set screw that holds the trigger on trigger becomes loose or is removed, reattach the trigger directly (flush) against the last collar/sleeve of the trigger rod. This is an important component in the timing mechanism of the marker. Do not confuse this set screw with the adjustable trigger screw.** Be aware there is a spring and ball bearing holding the safety located behind the trigger guard. Be careful when removing the trigger guard not to lose them.

## -External Velocity Adjuster

The external velocity adjuster is located on the front of the bottomline pressure regulator. Using a 3/16 inch allen wrench turn the adjuster clockwise to increase velocity and counter-clockwise to decrease velocity. Adjust in 1/4-turn increments.

## Specifications

Mfg./Model.....	AirStar/SuperNova
Caliber.....	.68 ball
Length-overall.....	20" with 12" barrel
Weight (without tank).....	3.8 lbs.
Standard barrel length.....	12"
Muzzle velocity.....	320/150 fps
Chamber pressure.....	95 PSI
Action.....	Semi-Automatic
Power.....	direct gas (CO2 or HPA)
Breach Mechanism.....	Articulated barrel
Trigger pull.....	2.5 lbs.
Method of feeding.....	Hopper
Max. Cycle Rate.....	900 shots/minute
Max. rate of fire.....	10 shots/sec.
Maximum range.....	250 ft.
Rifling.....	none

## Cleaning And Maintenance

### -Cleaning

Remove the air supply and ball hopper. Depressurize the unit. Clean your SuperNova with warm water. Remove the twist lock barrel from the main housing of the unit and clean both pieces (barrel assembly and housing). In 98% of the cases this is sufficient breakdown for cleaning. Remove any dirt, paint or gelatin. An old toothbrush may help. Shake out excess water, hand dry or use compressed air or warm air from a hair dryer to remove excess moisture.

### -Lubrication

1. **It is very important to keep the barrel lubricated in the area behind the O-ring as shown in the diagram.** The barrel must be able to move easily to accommodate the precise timing of loading and shooting. If this area is not lubricated you may experience high ball breakage.
2. There are four O-rings on the SuperNova that need lubrication. Lubricate these four O-rings with an approved lubricant for O-rings. All four of the O-rings are on the barrel assembly. Two are located on the barrel. The other two are located on the Barrel Retainer that holds the barrel and one of those is hidden on the inside of the barrel retainer where it comes in contact with the barrel. To lubricate this hidden O-ring, pull the barrel toward

you and lubricate the barrel. (see diagram) DO NOT LUBRICATE ANY OTHER O-RING OR COMPONENT OF THE SuperNova.

3. After daily play put five (5) drops of lubricant into the ASA adapter. This will allow lubrication to all internal O-rings.

4. DO NOT USE WD 40 OR ANY OTHER AEROSOL LUBRICANT ON THE SuperNova.

### **-Adjusting Velocity**

The external velocity adjuster is located on the front of the bottomline pressure regulator. Using a 3/16 inch allen wrench turn the adjuster clockwise to increase velocity and counter-clockwise to decrease velocity. Adjust in 1/4-turn increments.

## **Field Cleaning And Removing Barrel Under Pressure**

DO NOT ATTEMPT TO REMOVE THE BARREL ASSEMBLY WHILE UNDER PRESSURE WITHOUT ENGAGING THE SAFETY TO THE "ON" POSITION. **To engage the safety, pull the trigger back and hold.** While holding trigger back-engage safety. This safety system accomplishes two things:

1. Under pressure-when engaged- the marker is forced to shoot the ball out of the breach area.
2. Under pressure-when engaged-the safety shuts off the airflow on the low-pressure side of the unit to allow fast removal of the barrel assembly for field cleaning.

Clean barrel and breach area with squeegee. Insert barrel assembly into slots-twist lock and push safety to the fire position. **TO ENGAGE THE SAFETY YOU MUST HOLD TRIGGER BACK AND ENGAGE. TO RELEASE SAFETY IT IS NOT NECESSARY TO HOLD TRIGGER BACK-JUST PUSH TO THE "FIRE" POSITION.**

**WATCH OUT !** Removing the barrel assembly will allow balls in the hopper to free flow out of the marker. Make appropriate angle adjustments when removing.

## **Attaching Site Rail And Startup**

With the marker pointed in a **safe** direction and the **barrel attached** engage the air supply. To seat the O-rings properly on the regulator, cycle the marker 5-10 times rapidly. There should be **no air** escaping out of the screw hole located on the top of the marker.

**Attach** the site rail with the screw and site rail provided in the screw hole. It is not necessary to remove the site rail after that. The marker is now **loaded** and **operational**. If there was a ball in the breach it is ready to fire. If there is no ball in the breach, pull the trigger once to load the ball. The marker is ready to fire. There are two elements to the safety on the **SuperNova**. The first is the regular safety that locks the trigger into place and is engaged by pushing the safety to the "safe on" position. The second is that the safety shuts off the pressure on the low-pressure side to allow fast removal of the barrel assembly. Check marker for velocity...then play. Upon completion of play, remove all balls, remove air source, point the marker in a safe direction and pull the trigger to release pressure in the unit/or discharge any paintballs in the breach/barrel. Insert muzzle plug.