OWNER'S MANUAL

WWW.DANGEROUSPOWER.COM

REV-i

LIKE NOTHING BEFORE IT.

DP ENGINEERING

A WORD FROM OUR ENGINEERS AND DESIGN TEAM

OUR CHALLENGE WAS TO BLEND THE ART OF METAL SCULPTURE WITH MASTERFUL ELECTRONICS IN A PACKAGE THAT SYMBOLIZES STRENGTH, POWER, AND DEXTERITY.

BUILT WITH PASSION, THE DP REV-i WAS UNLEASHED.

CONGRATULATIONS ON OWNING THE MOST ADVANCED PAINTBALL MARKER ON THE PLANET.

INNOVATIVE FEATURES

Ultra low-profile **Clamping Feedneck**. That's right - the clamping feedneck that is widely used throughout the paintball industry was originally designed by the folks at DP Engineering.
(U.S. Patent - US7252080B2)

RAPS™ (Rapid Air Pressurizing System) Flip Lever Style ASA. This revolutionary ASA makes standard twist-knob ASAs a thing of the past. Another DP Engineering original.
(U.S. Patent - US7156135)

Dump valve bolt and **'see-through' window**. With just five o-rings and one moving part in its entire operation, routine maintenance for the DP REV-i is no longer a chore! Inspired by DP Engineers' love for exotic sport cars and motorcycles, the option to view REV-i's flawless internal bolt system is a refined touch, dedicated to the mighty Ferrari Enzo.
(U.S. Patent Pending - US12153382)

Dump Valve bolt / Rear Mounted Pressure Gauge (RMPG). The folks at DP put the gauge where it belongs - in the back, where you can see it in 'real time' during the action. It's also an excellent measuring device to determine the correlation between pressure and velocity.
(U.S. Patent Pending - US12153382)

SwitchBlade™ Trigger. Customize your game plan by flipping the trigger to the desired side, no tools necessary. Two amazing triggers in one - priceless.
(U.S. Patent Pending - US12139484)

Grip frame OLED. Introducing the first ever, stock, 'in the grip frame' OLED, for your viewing (and playing) pleasure.

RF Ready with a hopper transmitter control interface. Compatible and ready for use with the latest in hopper technology.

Ultra sharp OLED display. The sharpest OLED display in its class, providing a high contrast (2000:1), high resolution (192 x 32), and extremely power efficient display screen.

Configurable modes. Rule change "immune" Tournament Modes that are fully user configurable. Flexible for all levels and modes of play.

Comprehensive Breakout Mode Controls. Provides the most flexible and creative recreational play and training operations available.

"Tune Assist". An easy-to-use control that quickly adjusts your marker for optimum speed and efficiency without programming.

WARNINGS
IMPORTANT SAFETY INSTRUCTIONS AND GUIDELINES!

The DP REV-i is NOT A TOY. Treat it with the same respect and care you would a firearm.

Carelessness, misuse, and failure to adhere to the warning and guidelines printed in this Owner's Manual may result in property damage, injury, or death. User assumes all risks associated with use of the DP REV-i.

Always ensure that proper safety gear - eyes, face, ear, and head protection - conforming to ASTM standard F1776 (USA) or CE (Europe) are worn at all times when paintballs are within range.

Persons under the age of 18 must have adult supervision at all times during use of the REV-i, or any paintball firing device.

Observe all local and national laws regarding rules and regulations.

The REV-i should only be used on a permitted and regulated paintball field where safety rules and guidelines are strictly enforced.

7. Only use compressed air or nitrogen. DO NOT USE CO2!

8. Only use high quality, .68 caliber paintballs.

9. Never point your REV-i at an unintended target.

10. Always treat your REV-i as if it were loaded.

11. Keep your REV-i turned OFF until ready to use.

12. Always measure the velocity of paintballs from your REV-i with a suitable chronograph device before play.

13. Never look down the barrel or breech area of the REV-i without first ensuring that the marker is switched to the OFF position, with NO AIR in the marker.

    NOTE- SEE NOTE ON PAGE 3 FOR DIRECTIONS ON REMOVING RESIDUAL AIR FROM A POWERED 'OFF" MARKER.

14. Never put any body parts or foreign objects into the breech or feed tube.

WARNINGS
IMPORTANT SAFETY INSTRUCTIONS AND GUIDELINES!

15. Always use the supplied barrel cover when your REV-i is not in use at the field. Doing so will help secure the safety of yourself and those around you.

16. Never allow pressurized gas to come into contact with your body. Serious harm, injury, or death may occur.

17. When not in use, always turn your REV-i to the OFF position.

18. Promptly remove any paintballs from your REV-i when not in use.

19. Always remember to remove residual air from your REV-i before attempting maintenance or service.

20. Always remember to remove residual air from your REV-i before storage or transportation.

    NOTE- POWERING ' OFF' THE MARKER WILL NOT AUTOMATICALLY REMOVE RESIDUAL AIR. TO SAFELY REMOVE RESIDUAL AIR, PLEASE DO THE FOLLOWING:

    A. Remove loader and paintballs from marker.
    B. Turn Eye Sensors to the OFF position.
    C. Point marker in a safe direction.
    D. Fire marker until all residual gas is removed.

21. Always store your REV-i in a safe place.

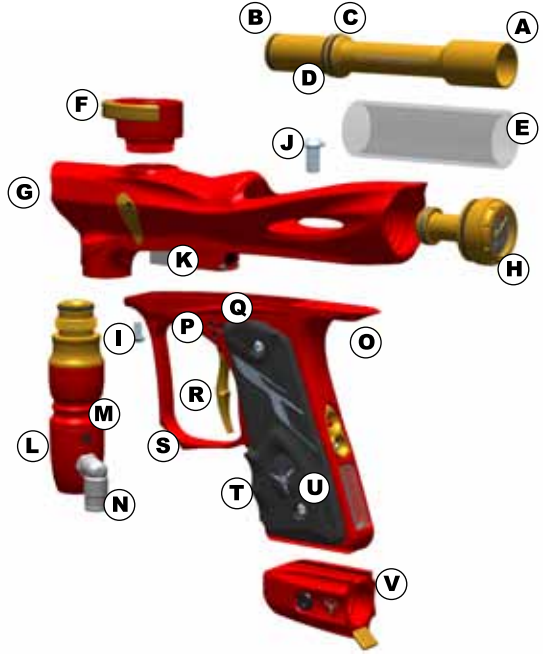
22. Do not discard the Owner's Manual. In the event of transfer or resale, this guide must accompany the marker.

23. When in doubt, ALWAYS seek expert advice by contacting a reputable airsmith familiar with paintball markers, or by contacting DP Engineering's Customer Service Staff.

CONTENTS

GETTING TO KNOW YOUR REV-i

Your REV-i is a sophisticated piece of machinery, designed for superior performance along with ease of use and maintenance. For maximum enjoyment and safety while using your REV-i, please take the time to acquaint yourself with its operation, controls, programmable features, and care and maintenance instructions found in this Owner's Manual.



REV-i PARTS LIST

A. Dump Valve Bolt

B. Bolt O-ring #1

C. Bolt O-ring #2

D. Bolt O-ring #3

E. Clear Bolt Tube (Anodized Aluminum Bolt Tube not shown)

F. Low-Rise Clamping Feedneck

G. REV-i Body

H. Dump Valve Plug/Rear Mounted Pressure Gauge

I. Body / Frame Connector Screw #1

J. Body / Frame Connector Screw #2

K. Two-Way Solenoid

L. OPR (Operating Pressure Regulator)

M. Swivel Screw

N. Macro-line Elbow Fitting

O. REV-i Trigger Frame

P. Trigger Adjustment Screws

Q. Trigger Removal Screw

R. SwitchBlade™ Trigger

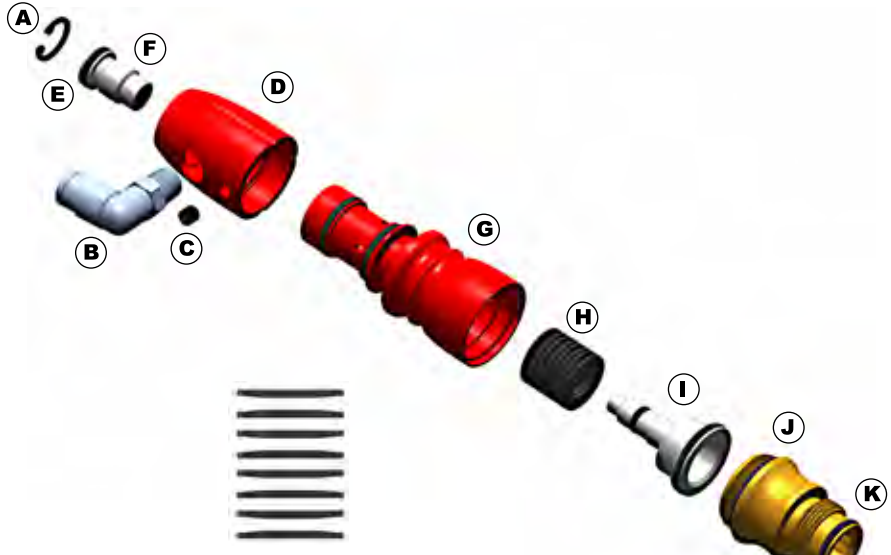
S. Trigger Guard

T. Butterfly Grip Panel

U. Grip Screws

V. RAPS™ (Rapid Air Pressurizing System) ASA

INLINE REGULATOR



SHIM STACK

OPR PARTS LIST

A. C-clip

B. Macro-line Elbow Fitting

C. OPR Bottom Swivel Screw

D. OPR Bottom Housing

E. Regulator Seat O-ring

F. Regulator Adjustment Screw

G. OPR Main Body Housing

H. OPR Piston Washers x 8

I. OPR Piston

J. OPR Piston Base Sealing Gasket

K. OPR Top Housing Ring

CONTENTS OF PACKAGE

Your REV-i package should include ALL of the following items:

REV-i Marker Body

3 Barrel Backs (sizes .69, .68, and .67)

2 Barrel Tips (10.45 in. and 8.48 in.)

11 Piece Ball-Tip Allen Key Wrench Set

Large Dump Valve Plug Wrench

T-Handle Allen Wrench (5/16”)

T-Handle Allen Wrench (5/32”)

Color-matching Aluminum Sleeve

Spare O-rings

DP-40 Lubricant

Barrel Blocking Device

Custom REV-i Carrying Case

Owner’s Manual

Registration Card

EVERYTHING YOU NEED TO GET STARTED

Prepare the following items in order to begin using your REV-i:

One 9V battery. Be sure that the battery is fresh and from a reputable manufacturer.

Paintball loading device. (Recommended minimum load rate of 25 BPS)

.68 caliber paintballs. Always use fresh, high-quality paint with proper bore size for best results.

Approved air tank utilizing COMPRESSED AIR or NITROGEN ONLY.

INSTALLING THE BATTERY

Carefully remove the 2 hexagonal screws (3/32") holding the left panel in place.

Locate battery harness and attach 9V battery to the connector pad. Do not use force!

Replace battery in grip frame as shown in illustration.

Replace grip frame and screws. Do not over tighten screws!

ATTACHING A PAINTBALL LOADER

Loosen thumbscrew counterclockwise by hand.

Release clamp on feedneck.

Insert feed tube of loader unit.

Close clamp securely. Loader should fit snug within feedneck.

If loader is too loose, remove and adjust thumbscrew.

WARNING
TAKE CARE NOT TO USE EXCESSIVE FORCE - DOING SO MAY CAUSE DAMAGE TO LOADER OR THE REV-i!

CONNECTING MACRO-LINE TO HIGH PRESSURE REGULATOR AND QUICK RELEASE FLIP LEVER ASA (RAPS™)

Pull back the collect section of the macro-line elbow located on your RAPS™ ASA.

Keeping the collet back, insert macro-line hose firmly into the fitting and release the collet. Be sure that the hose is seated all the way to the end of elbow fitting.

Repeat the same process on the macro-line elbow located on your HPR to connect the RAPS™ ASA.

WARNING
BE SURE TO REGULARLY INSPECT THE CONDITION OF YOUR MACRO-LINE HOSE TO ENSURE PROPER FITMENT. ALWAYS CHECK TO MAKE SURE THE MACRO-LINE HOSE IS SEATED ALL THE WAY TO THE END OF THE ELBOW.

ATTACHING AIR TANK TO RAPS™ FLIP LEVER ASA

Swing flip lever to the ‘release’ position.

Attach air tank by carefully screwing it into the threaded portion of the RAPS™ ASA. Make sure tank fitment is tight and all the way in.

Return flip lever of the RAPS™ ASA to the ‘close’ position.

A brief sound of air entering the system is normal. The REV-i is now pressurized.

WARNING
NITROGEN OR COMPRESSED AIR TANKS ONLY! NEVER USE CO2.

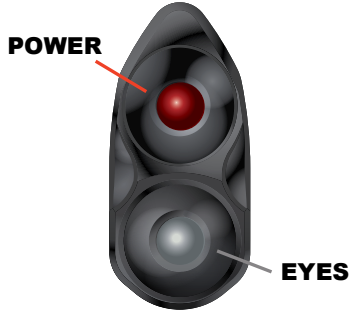
SWITCHING YOUR REV-i ON/OFF

Press and hold the Power Button until the REV-i turns on. Release the power button to continue.

To power OFF your REV-i, press and hold the Power Button until your marker shuts off.

TURNING EYES ON/OFF

The REV-i uses a break beam eye sensor system to detect paintballs in the firing position. When the eye sensors are turned on, the circuit board will inhibit the firing of the bolt when no paintballs are detected. This prevents unintended paintball breakage in the breech of the marker. For optimum results during play, always leave the eyes in the 'ON' position. When 'dry firing', it will be necessary to switch the eye sensors to the 'OFF' position.



Tap the Eye Button to toggle the eye function between ON or OFF. Your marker will display the 'EYES ON' icon on the OLED display when enabled and will fire at the 'EYES ON' rate of fire.

When the eye function is disabled, the 'EYES OFF' icon will appear on the OLED display and your marker will fire at the 'EYES OFF' rate of fire.

The multi-color LED will flash to indicate 'EYES OFF' (slow flash) or 'iFAULT™' (fast flash - see page 37) or stay on continuously if breech is empty.

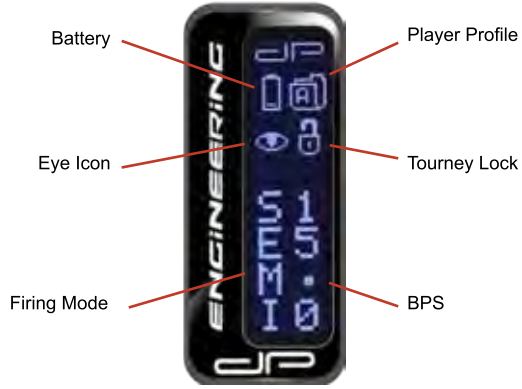
FIRING YOUR REV-i

While the REV-i is ON, tap the Power Button to scroll thru all the enabled firing modes.

Select desired firing mode.

Depress the trigger to fire the REV-i.

The entire firing operation can be programmed electronically for optimal results.



VELOCITY ADJUSTMENT

Locate the (1/4”) allen key wrench included with your REV-i.

Adjust screw located at the bottom of Operating Pressure Regulator (OPR) to increase or decrease velocity.

Turn screw counterclockwise towards the (+) sign to increase velocity.

Turn screw clockwise towards the (-) sign to decrease velocity.

Helpful Hint: The Rear Mounted Pressure Gauge (RMPG) provides a guideline to the velocity of the projected paintballs through its correlation to air pressure as measured in Pounds per Square Inch (PSI). This is for reference only and is NOT RECOMMENDED as a substitute for an approved chronograph device.

WARNING
FAILURE TO FOLLOW REGULATIONS REGARDING MAXIMUM ALLOWABLE VELOCITY, CALCULATED IN FEET PER SECOND (FPS), MAY RESULT IN DAMAGE OF PAINTBALL MARKER, SERIOUS INJURY OR DEATH. BE RESPONSIBLE AND ALWAYS USE A CHRONOGRAPH TO DETERMINE ACCURATE VELOCITY BEFORE PLAY. DP ENGINEERING RECOMMENDS THAT THE VELOCITY NEVER EXCEED 300 FPS.

TRIGGER ADJUSTMENT

Note the three adjustment screws (marked A, B, and C) in the vicinity of the SWITCHBLADE™ Trigger.

Screw A (5/64”) adjusts the amount of trigger travel prior to the marker firing. Turning this screw clockwise will reduce the amount of trigger travel. Turning this screw counterclockwise will increase the amount of trigger travel.

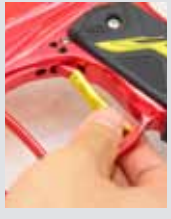
Screw B (5/64”) sets the amount of trigger travel after the marker has been fired. Turning the screw clockwise will reduce the amount of trigger travel. Turning the screw counterclockwise will increase the amount of trigger travel.

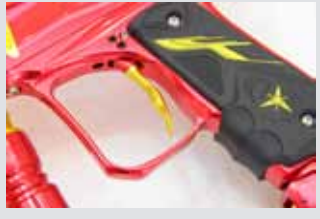
NOTE
BE CAREFUL NOT TO TURN THE SCREW TOO FAR IN EITHER DIRECTION, AS DOING SO MAY PUSH THE TRIGGER PAST THE FIRING POINT AND CAUSE OPERATIONAL FAILURE.

TRIGGER ADJUSTMENT (CONTINUED)

Screw C (3/32”) adjusts the strength of the trigger’s return to rest by either reducing or increasing the magnetic pull. Turning this screw counterclockwise will decrease the strength. Turning this screw clockwise will increase the strength. Do not turn the screw too far - doing so may weaken the magnetic pull and prevent the trigger from being able to fully return to rest.

REV-i’s SWITCHBLADE™ Trigger. This revolutionary trigger system allows the user to quickly switch between two trigger styles without the use of tools or disassembly. Simply flip the trigger and lock in place the desired trigger style.





PROGRAMMING YOUR REV-i

Please refer to REV-i Circuit Board Programming Flow-Chart for a complete overview.

To enter Programming Mode, POWER ON the REV-i while pulling the trigger down. Release the power button and trigger to continue.

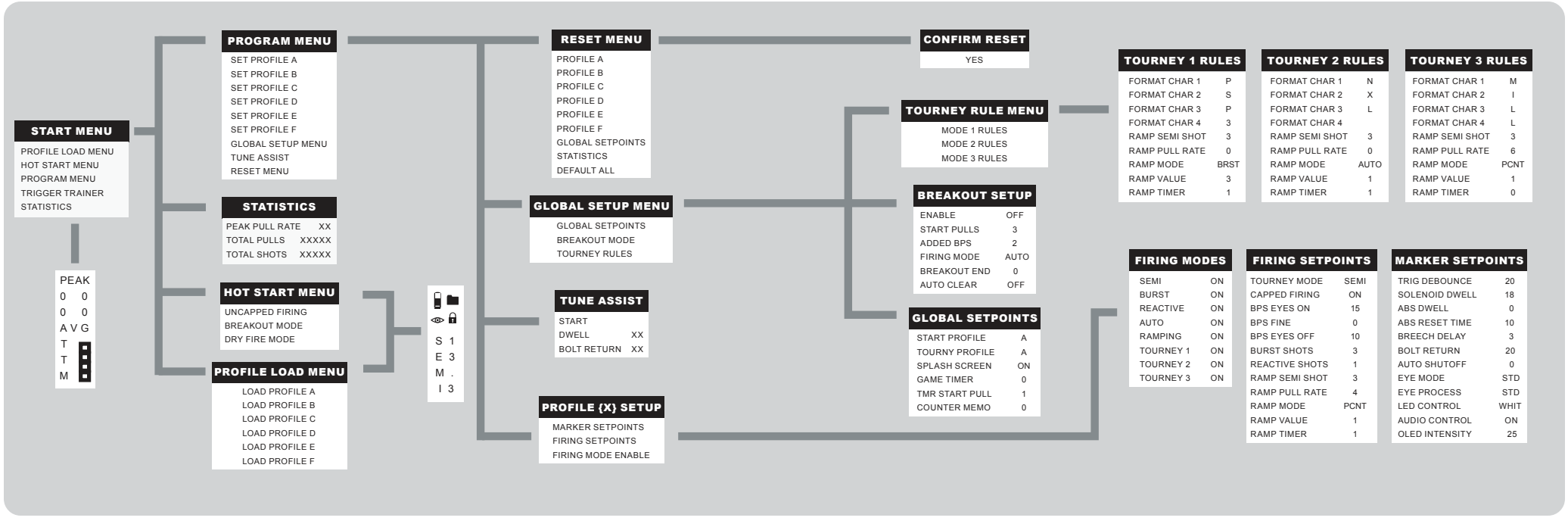
NOTE
YOUR MARKER WILL NOT START IN PROGRAMMING MODE IF THE TOURNEY MODE LOCK SWITCH (SEE PAGE 38) IS IN THE ‘ON’ POSITION.

To exit Programming Mode, either POWER OFF the REV-i or scroll through modes until the ‘x’ appears in the upper right corner of the screen. When the ‘x’ is displayed, pull and hold the trigger to return to live firing mode.

MENU NAVIGATION

Pull and release the trigger to scroll through the available menu options. An arrow on the left side of the display will indicate your current selection. To select a menu option, simply pull and hold the trigger. To adjust the setpoint, tap the Power Button to increase the value or tap the Eye Button to decrease the value. Once the desired setpoint value is reached, simply scroll to another setpoint, or exit. Once you scroll past the last option in a menu, a “Back Arrow” icon will appear in the upper left corner of the OLED display. When selected, the “Back Arrow” option returns you to the previous menu.

REV-i CIRCUIT BOARD PROGRAMMING FLOW-CHART



START MENU

Profile Load Menu

This option lets you load a profile. You can define up to six individual profiles. Each profile stores a complete collection of setpoints and allows instant reconfiguration of settings and preferences.

Hot Start Menu

This option lets you quickly access the following options:

- Uncapped Firing:
Instantly uncaps the rate of fire on your marker.

- Breakout Mode:
Instantly turns on the currently defined Breakout Mode.

- Dry Fire Demo:
Instantly bypasses all eye processing on your marker and fires at the 'EYES ON' rate of fire.

START MENU (CONTINUED)

Program Menu

This menu provides access to all the marker setpoints. Each time the marker is programmed, the settings are stored into a unique profile. You can program up to six individual profiles. You can program up to six individual profiles. From this menu you can also access the Global Setpoints (those that apply to all marker operations), the Tuning Assist function and the Reset Menu.

Trigger Trainer Mode (TTM)

This option puts you into "training" mode that lets you measure how fast you can pull the trigger. This mode will capture your Average and Peak pull rates, and display a bar graph based on your current pull rate. To start a training cycle, pull the trigger repeatedly for a short burst. When you stop pulling, the marker will update the OLED display with your pull rate data. Pull another trigger burst to measure your rate again.

START MENU (CONTINUED)

Statistics

This option displays the following statistical information about your marker:

- Peak Pull Rate
This displays the highest pull rate achieved since the last reset.

- Total Pulls
This displays the total number of trigger pulls since the last reset.

- Total Shots
This displays the total number of bolt cycles / shots fired since the last reset. This total is also used for your Memo function.

All of these statistical counters can be reset to zero from the "Reset Menu".

PROFILE LOAD MENU

This option allows you to choose which profile you wish to load should you want to manually override the "Start Profile" setpoint in the Global Setpoint section.

GLOBAL SETUP MENU

Start Menu > Program Menu > Global Setup Menu

This menu provides access to setpoints that apply to all profiles and marker operations. They are organized into three groups:

1.Global Setpoints

Start Menu > Program Menu > Global Setup Menu > Global Setpoint

- Start Profile
This setpoint determines which profile your marker will use when it starts.

- Tourney Profile
This setpoint determines which profile your marker will use when the TOURNEY MODE LOCK SWITCH is set to 'ON'.

- Splash Screen
This determines if the splash screen is displayed at marker startup.

GLOBAL SETUP MENU (CONTINUED)

- Game Timer
Sets the time (in minutes) for your game timer. A value of zero disables the game timer feature.

- TMR Start Pull
Determines which trigger pull will start the game timer after marker start up. This allows you to fire “x” number of clearing shots without starting the timer.

- Counter Memo
This setpoint lets you activate the “Memo” icon on the OLED display after a desired number of marker cycles have occurred. This setpoint is programmed in thousands (i.e. 2 = 2000 marker cycles).

GLOBAL SETUP MENU (CONTINUED)

2.Breakout Mode

These setpoints allow you to define your own custom Breakout Mode:

- Enabled
This setpoint turns on/off the Breakout Mode operation.

- Start Pulls
Enable the Breakout Mode to choose which trigger pull will activate this mode.

- Added BPS
While the Breakout Mode is active, this setpoint lets you add additional balls per second to your programmed rate of fire.

- Firing Mode
This sets the mode the marker will fire in once Breakout Mode is activated.

- Breakout End
This setpoint lets you choose how the Breakout Mode will end. Choose 0 to end the Breakout Mode operation once the trigger is idle 0.2 seconds, or choose the length of time (in seconds) the Breakout Mode will remain active.

GLOBAL SETUP MENU (CONTINUED)

- Auto Clear
When this is set to ON, the Breakout function will have to be re-enabled via the programming menu or through the Hot Start option. If Auto Clear is set to OFF, simply power cycle your marker to re-enable the Breakout mode.

3.Tourney Rules

Start Menu > Program Menu > Global Setup Menu > Tourney Rules

The REV-i provides fully programmable tournament operations, allowing you to stay compliant in the event of any future tournament rule changes. Default support is provided for PSP, NXL and Millennium tournament formats. The user can also reconfigure these rules for other tournament formats or any new tournament format that is adopted in the future.

- Ramp Semi Shots
Defines the number of semi shots required before any ramping is allowed.

- Ramp Pull Rate
This is the trigger pull rate (trigger pulls per second) that needs to be achieved before ramping. Any semi shots defined must first be satisfied prior to ramping by pull rate. If this setpoint is zero, the marker will ramp immediately after the defined number of semishots are satisfied.

GLOBAL SETUP MENU (CONTINUED)

- Ramp Mode
Determines which firing mode to ramp to: Burst, Reactive, Full Auto, or Percent ramping.

- Ramp Value
In Burst Mode, it is the number of shots in a burst. In Reactive Mode, it is the number of shots fired with each trigger pull and release. In Percent ramping, it is the percentage of ramping used (Percentage = Ramp Firing Value x 100).

- Ramp Timer
Determines the amount of time the trigger can be at rest and still remain in the current ramping stage before reverting back to Semi Mode. This time value is entered in seconds. If this setpoint is zero, it will reset ramping when the trigger is released, or when your trigger pull rate drops below the Ramp Pull Rate setpoint.

TUNE ASSIST

Start Menu > Program Menu > Tune Assist

This option lets you quickly determine the best Dwell and Bolt Return Delay setting for optimal efficiency. Keep in mind that the current setting for Dwell and Bolt Return Delay will be overwritten in all profiles when this action is completed. To start, your marker **MUST BE UNLOADED**. Next, connect your marker to your air source.

NOTE
BE SURE YOU ARE STARTING WITH A FULL TANK OF AIR AND ADJUST YOUR MARKER'S REGULATOR TO FIRE PAINT AT APPROXIMATELY 285 FPS BEFORE YOU BEGIN. YOU MAY NEED TO MAKE MINOR ADJUSTMENTS TO YOUR REGULATOR SETTINGS WHEN YOU'VE COMPLETED THE TUNE ASSIST PROCESS.

When firing the marker in Tune Assist Mode, pause at least 1 second between trigger pulls.

Select START to proceed with Tune Assist. The Dwell value will start at 5ms. Each time you pull the trigger, your marker will dry fire a 3 shot burst and will increase the Dwell by 1ms. Keep pulling the trigger until your marker fires the burst with a consistent "pop" or report. You can also press the Eye Button to decrease the current Dwell value should you want to repeat the procedure for a given range of Dwell values. Press the Power Button to move on to the Bolt Return Delay adjustment.

Pull the trigger again firing a 3 shot burst. This time your Bolt Return Delay will start at the maximum value and decrease 1ms with each pull. Continue to pull the trigger until the LED flashes and the onboard speaker beeps. Your marker will automatically restart with the new optimal values.

RESET MENU

Start Menu > Program Menu > Reset Menu

The Reset Menu allows you to individually reset profiles, statistics, or your entire marker to factory default settings. Trigger scroll to the item you want to reset. To select the item you wish to reset, pull and hold the trigger. A confirmation screen will then ask you to confirm that you want to reset the item. Pull and hold to confirm.

MARKER SETPOINTS

Start Menu > Program Menu > Set Profile (x) > Marker Setpoints

- Trigger Debounce
This value sets amount of time (in milliseconds) the trigger must remain inactive prior to accepting a new trigger pull. Lowering this value can cause your marker to fire erratically when making successive trigger pulls. Raising this value will prevent erratic firing and provide reliable firing in sync with your trigger pulls.

- Solenoid Dwell
This setting allows you to adjust how long the solenoid is energized (in milliseconds). Higher Dwell times will consume more power and air when the solenoid is energized. Lower Dwell times consume less power when the solenoid is energized. Lowering this value too much may prevent the solenoid valve from opening altogether.

- Anti Bolt Stick Dwell
This setting allows you to add additional Dwell time (in milliseconds) to your solenoid Dwell setting. This will only affect the first shot fired after the Bolt Stick Reset Time is exceeded.

NOTE
YOU SHOULD ONLY USE THIS SETTING IF YOU EXPERIENCE FIRST SHOT DROP OFF.

MARKER SETPOINTS (CONTINUED)

Start Menu > Program Menu > Set Profile (x) > Marker Setpoints

- Anti Bolt Stick Reset Time
This setting allows you to set the amount of time the trigger can remain idle before adding the Bolt Stick Dwell setting. This value is ignored if the Bolt Stick Dwell is zero.

- Breech Load Delay
This setpoint establishes the amount of time (in milliseconds) between the eyes sensing the ball in the breech and activation of the bolt. This ensures a ball has dropped fully into the breech before the marker fires.

- Bolt Return Delay
This setpoint establishes the amount of time (in milliseconds) after firing a round that the marker waits to see the bolt transition back past the eyes. This value can be lowered when using high performance aftermarket bolts or when a proper tuning procedure is performed. This delay also provides the time out period to determine if an eye fault (iFault™) has occurred.

- Auto Shut Off
Allows you to adjust if or when your marker will automatically POWER OFF after no firing activity. Auto Shutoff values range from 0 to 60, with each increment adding 1 minute of time to the delay (1 to 60 min.). A value of 0 defeats the Auto Shutoff feature, and your marker will remain on until you manually POWER OFF.

MARKER SETPOINTS (CONTINUED)

Start Menu > Program Menu > Set Profile (x) > Marker Setpoints

- Eye Mode

Your Rev-I has 4 eye control modes:

Option 1 – IFLT (iFault™): While your eyes are functioning, your marker will fire at the BPS 'EYES ON' rate. If your marker's eyes become disabled, iFault™ will automatically switch to the BPS 'EYES OFF' rate automatically. If your eye functionality returns, iFault™ will automatically resume firing at the BPS 'EYES ON' rate.

Option 2 – STD (Standard): While your eyes are functioning, your marker will fire at the BPS 'EYES ON' rate. If your eyes stop working, your marker will stop firing until you manually bypass the eye operation.

Option 3 – OFF: All eye functions are disabled, and the marker operates at the BPS 'EYES OFF' rate of fire.

Option 4 – DEMO: This allows you to fire the marker at the BPS 'EYES ON' rate while all eye processing is bypassed. This is a dry fire mode only.

MARKER SETPOINTS (CONTINUED)

Start Menu > Program Menu > Set Profile (x) > Marker Setpoints

- Eye Process

Standard processing (STD) checks for a "ball in breech" status after each trigger pull before firing the marker. This process is slightly slower since it forces the board to wait for the breech delay time for each bolt cycle.

Advanced processing (ADV) looks for a "ball in breech" status immediately after the bolt cycle is complete. Once this condition is met, the marker is allowed to fire again immediately if required ("ball in breech" status is queued).

- LED Control

Along with the OLED display, your marker has a multicolor LED. This color can be customized to your choosing (up to 7 colors). The LED provides quick eye status indication in conjunction with the Eye Status indicator on your display. The LED Eye Status indicators are:

LED Solid = No ball in breech
LED Slow Flashing = Eyes have been manually turned off
LED Fast Flashing = Indicates an iFault™ alert
LED Off = Ball is properly seated in the breech and marker is ready to fire

- Audio Control

Audio feedback can be enabled or disabled. Feedback occurs during all programming and firing operations.

- OLED Intensity

Allows you to change the intensity level of your OLED display.

FIRING SETPOINTS (CONTINUED)

Start Menu > Program Menu > Set Profile (x) > Firing Setpoints

- Ramp Semi Shot
Defines the number of semi shots required before any ramping is allowed.

- Ramp Pull Rate
This is the trigger pull rate (trigger pulls per second) that needs to be achieved before ramping. Any semi shots defined must first be satisfied prior to ramping by pull rate. Likewise, if this setpoint is zero, the marker will ramp immediately after the defined number of semi shots are satisfied.

- Ramp Mode
Determines which firing mode to ramp to: Burst, Reactive, Full Auto, or Percent ramping.

- Ramp Value
This value is associated with the Ramp Mode. In Burst Mode, it is the number of shots in a burst. In Reactive Mode, it is the number of shots fired with each trigger pull and release. In Percent ramping, it is the percentage of ramping used (Ramp Firing Value x 100).

- Ramp Timer
Determines the amount of time the trigger can be at rest and still remain in the current ramping stage before reverting back to Semi Mode. This time value is entered in seconds.

FIRING MODE ENABLE

Start Menu > Program Menu > Set Profile (x) > Firing Mode Enable

Allows you to enable/disable any firing mode in a profile. A disabled firing mode is skipped when scrolling thru firing modes.

NON-ADJUSTABLE FEATURES

- Forced Shot
You can force the marker to fire during empty breech conditions by holding the trigger down for one second. Forced Shot is useful for initial paint loading using sound activated hoppers.

- Trigger Buffering
This allows you to fire a smooth stream of paint by queuing a valid trigger pull during a firing cycle.

CARE AND MAINTENANCE

Your REV-i was designed to be reliable, easy to maintain, and easy to repair. Routine maintenance will ensure many years of performance and enjoyment. When in doubt, always seek the assistance of a certified technician from a reputable pro shop, or contact DP Engineering Customer Service.

Degassing the REV-i

Always be sure to completely de-gas your marker before performing maintenance or service repair. Carefully follow the instructions below in sequence to ensure that all remaining air has been removed from the entire operation:

Flip the RAPS™ ASA to the “OFF” position. This disconnects the air system from the marker.

Remove the paintball loading device and check to make sure there are no paintballs within the breech.

Unscrew the air system from the RAPS™ ASA.

Point the marker in a safe direction, then fire 1-2 shots to remove air from the OPR. Be aware that the marker may still fire without an air system attached!

POWER OFF the marker.

IMPORTANT NOTES BEFORE SERVICING YOUR MARKER :

USE OF HYDROCARBON BASED OILS, SUCH AS AUTOMOTIVE ENGINE OIL, WD-40, VASELINE, ETC. CAN SEVERELY DAMAGE INTERNAL SEALS AND ARE NOT RECOMMENDED.

ALWAYS USE A HIGH QUALITY LUBE OF CORRECT VISCOSITY, SPECIFICALLY DESIGNED FOR PAINTBALL MARKERS. ALWAYS USE DP-40 LUBE (SUPPLIED) OR ANOTHER HIGH QUALITY LUBE OF CORRECT VISCOSITY SPECIFICALLY DESIGNED FOR PAINTBALL MARKERS.

DO NOT APPLY EXCESSIVE LUBRICANT.

ALWAYS INSPECT AND CLEAN YOUR MARKER AFTER EACH USE.

NEVER APPLY EXCESSIVE FORCE WHEN REMOVING OR REPLACING SCREWS. DOING SO MAY STRIP THE SCREW HEADS OR DAMAGE THREADS.

ALWAYS USE THE APPROPRIATE TOOLS AND THE CORRECT SIZE.

REFRAIN FROM SUBMERSING ENTIRE MARKER IN LIQUID. KEEP SENSITIVE ELECTRONICS SUCH AS SOLENOID AND CIRCUIT BOARD FREE FROM MOISTURE.

NEVER ALLOW SOMEONE WHO IS UNFAMILIAR WITH YOUR MARKER TO PERFORM MAINTENANCE OR REPAIR WORK. WHEN IN DOUBT, CONTACT DP ENGINEERING CUSTOMER SERVICE.

CLEANING THE EYE-SENSOR BREAK BEAM SYSTEM

The function of the break beam sensor eyes is to allow the firing circuit to 'time' the activation of the solenoid. This prevents 'chopping' of paint, which is caused by the bolt cycling within the breech without the paintball being actually seated in the proper firing position. When the eye sensors are ON, the gun will not fire if the beam does not sense a paintball. To ensure proper function, the eye sensors should be cleaned after every other use, or when paintballs have been broken within the marker. More frequent cleaning may be necessary when using paintballs that have 'oily residue' on the surface of the shell. To avoid malfunction, always use fresh and clean paint from a reliable manufacturer.

To clean the eyes:

Locate the eye cover plates on either side of your REV-i body. **(SEE PIC A)**

Using provided allen key wrench (5/64"), carefully remove the eye cover screw on one side by inserting ball point tip and turning wrench handle counterclockwise. **(SEE PIC B)**

Lift eye cover plate, exposing eye wires, spring, and ball detent. **(SEE PIC C)**

CLEANING THE EYE-SENSOR BREAK BEAM SYSTEM

(CONTINUED)

4. Carefully life eye wires and pull out the eye sensors from the socket. Be careful not to lose the spring and the ball detent. **(SEE PIC D)**

5. With a cotton swab, gently wipe the back and front side of the eye sensor and the eye socket to remove any debris or residue. **(SEE PIC E)**

6. Replace eye sensors back to original position. Be sure the eyes are aligned correctly and facing the direction of the breech.

7. Replace eye cover plate in original position and gently tighten eye cover screws clockwise. DO NOT OVER-TIGHTEN! **(SEE PIC F)**

8. Repeat the same procedure on the other side.

HELPFUL HINT
DO NOT PULL ON THE EYE WIRES. USE A SMALL PICK OR SCREW DRIVER TO GENTLY LIFT THE WIRES UP. THIS WILL LIFT THE EYE SENSORS OUT OF THE EYE SOCKET.

CLEANING THE BALL DETENTS

The ball detents and spring should be inspected during the cleaning of the eye sensors. Replace these parts should you notice any damage, no matter how slight.

Locate the eye cover plates on either side of your REV-i body.

Using provided allen key wrench (5/64”), carefully remove the eye cover screw on one side by inserting ball point tip and turning wrench handle counterclockwise. **(SEE PIC A)**

Lift eye cover plate, exposing eye wires, spring, and ball detent. **(SEE PIC B)**

Remove spring by carefully lifting it up by hand or with the aid of small tweezers. **(SEE PIC C)**

CLEANING THE BALL DETENTS (CONTINUED)

5. Place finger within breech, and gently push on the detent from the inside of marker body. Remove ball detent. **(SEE PIC D)**
6. Check the spring for proper tension and the ball detent for any damage. Replace with new part(s) if necessary.
7. With a cotton swab, clean the spring, ball detent, and detent groove. **(SEE PIC E)**
8. Replace detent back to original position, with the circular side down towards the breech.
9. Replace spring over the detent in the original position.
10. Replace eye cover plate in original position and gently tighten eye cover screws clockwise. DO NOT OVER-TIGHTEN! **(SEE PIC F)**
11. Repeat the same procedure on the other side.

OPERATING PRESSURE REGULATOR (OPR) DISASSEMBLY AND MAINTENANCE

As its name implies, the OPR regulates the amount of air-flow, which determines paintball velocity. Regular inspection and cleaning of your OPR is an essential part of keeping your REV-i running in top condition. Follow the easy steps outlined below to ensure that your OPR remains trouble-free.

GENERAL DISASSEMBLY OF OPR

Before disassembly of your regulator, be sure to disconnect the macro-line hose from the elbow fitting attached to your regulator. This is accomplished by pulling back on the collet of the elbow fitment, while simultaneously pulling the macro-line out to remove.

With a firm hold on the OPR body, unscrew by hand the entire unit in a counterclockwise direction. If the OPR unit is difficult to turn by hand, a rubber strap wrench available in most hardware stores may be used. **(SEE PIC A)**

NOTE
DO NOT UNSCREW BY USING WRENCH OR PLIERS, AS DOING SO MAY SCRATCH AND DAMAGE THE ANODIZED SURFACE.

OPERATING PRESSURE REGULATOR (OPR) DISASSEMBLY AND MAINTENANCE (CONTINUED)

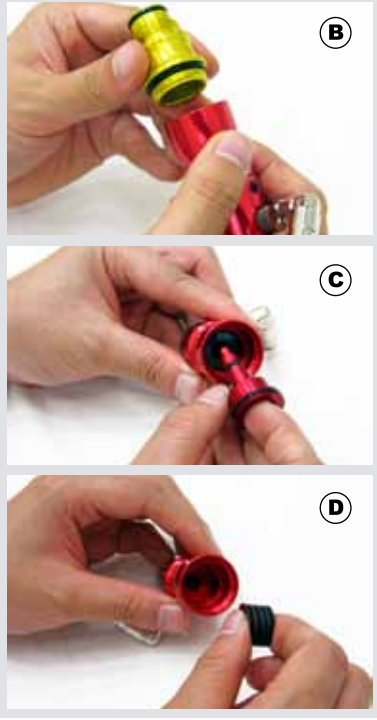
3. By hand or with the assistance of a strap wrench, unscrew the OPR Top Housing Ring from the OPR Main Body Housing. **(SEE PIC B)**

4. Place finger inside OPR Piston, and lift to remove. **(SEE PIC C)**

5. Carefully remove OPR Piston Washers from inside OPR Main Body Housing by turning it upside down on a flat surface. **(SEE PIC D)**

SHIM STACK

NOTE
PLEASE NOTE THE PROPER STACKING ORDER AND DIRECTION OF THE SHIMS FOR CORRECT REASSEMBLY!



OPERATING PRESSURE REGULATOR (OPR) DISASSEMBLY AND MAINTENANCE (CONTINUED)

6. Using ‘C-clip’ pliers (not supplied), remove the C-clips from the OPR Bottom Housing. Take care not to scratch any anodized surfaces. **(SEE PIC E . F)**

7. Using the supplied allen wrench key (1/4”), remove the Regulator Adjustment Screw. **(SEE PIC G)**

OPERATING PRESSURE REGULATOR (OPR) DISASSEMBLY AND MAINTENANCE (CONTIUNED)

CLEANING AND MAINTENANCE OF OPR

Remove all visible debris and dirt with a lightly dampened and clean cotton cloth. Take care not to scratch the surface of any regulator parts.

Lightly apply a small amount of DP-40 lubricant to the tip of a cotton swab. **(SEE PIC A)**

Apply lubricant to the o-ring located on the base of the Regulator Adjustment Screw. **(SEE PIC B)**

NOTE
CAREFULLY INSPECT O-RING PRIOR TO APPLYING LUBRICANT. REPLACE IF O-RING APPEARS WORN, CRACKED, TORN, OR DAMAGED.

OPERATING PRESSURE REGULATOR (OPR) DISASSEMBLY AND MAINTENANCE (CONTINUED)

4. Apply lubricant to the o-ring located on the base of the OPR Piston. **(SEE PIC C)**

5. Apply lubricant to the o-ring located on the stem of OPR Piston. **(SEE PIC D)**

6. Apply lubricant to the 2 o-rings located on the OPR Top Housing Ring. **(SEE PIC E . F)**

Be careful not to apply excess pressure, as doing so may damage sensitive parts and/or strip delicate threads.

DISASSEMBLY AND MAINTENANCE OF DUMP VALVE BOLT AND DUMP VALVE PLUG

Unscrew front of barrel from REV-i body.

Insert supplied T-Handle Allen Wrench (5/16”) through front of marker body and unscrew Rear Mounted Pressure Gauge. **(SEE PIC A)**

Remove Dump Valve Plug from marker body. **(SEE PIC B)**

Remove Dump Valve Bolt from marker body. It may be necessary to use your finger to pull it out, as illustrated. **(SEE PIC C)**

DISASSEMBLY AND MAINTENANCE OF DUMP VALVE BOLT AND DUMP VALVE PLUG (CONTINUED)

5. Remove Clear Bolt Sleeve. **(SEE PIC D)**

6. Wipe off all visible debris and grime from the Dump Valve Bolt, Dump Valve Plug, and internal of REV-i body with a soft dampened cotton cloth and cotton swab. **(SEE PIC E)**

7. Lightly apply DP-40 lubricant to the tip of a cotton swab. **(SEE PIC F)**

DISASSEMBLY AND MAINTENANCE OF DUMP VALVE BOLT AND DUMP VALVE PLUG (CONTINUED)

8. Apply lubricant to the two o-rings located on the Dump Valve Bolt. **(SEE PIC G . H)**

9. Apply lubricant to the two o-rings located on the Dump Valve Plug. **(SEE PIC I . J)**

10. Reassemble Dump Valve Bolt and Plug in reverse order.

NOTE
THE ABOVE STEPS ARE ALL THAT ARE REQUIRED FOR NORMAL BOLT MAINTENANCE. PROCEED FURTHER TO ACCESS SOLENOID AND TRIGGER.

WARNING
NEVER USE FORCE DURING DISASSEMBLY OR REASSEMBLY. ALWAYS SEEK ASSISTANCE FROM A QUALIFIED AIRSMITH OR CONTACT DP ENGINEERING CUSTOMER SERVICE IF YOU ARE UNCERTAIN OF ANY INSTRUCTIONS DESCRIBED IN THIS MANUAL.

SEPARATING REV-i BODY FROM TRIGGER FRAME

Locate screw underneath REV-i body, between OPR and Trigger Guard. Using (3/32") allen key wrench, loosen Connector Screw #1 by turning it counterclockwise. **(SEE PIC A)**

Locate Connector Screw #2 within marker body by looking over top of REV-i body, through the bolt window. Using (5/32") allen key wrench, loosen screw by turning it counterclockwise. **(SEE PIC B)**

Separate the REV-i body from the trigger frame. **(SEE PIC C)**

REMOVING SWITCHBLADE™ TRIGGER FROM FRAME

Locate the two trigger adjustment screws. Use (5/64") allen key wrench to loosen and remove both screws by turning them counterclockwise. Be careful not to misplace the screws. **(SEE PIC A . B)**

Locate trigger removal screw. Use (3/32") allen key wrench to loosen and remove screw by turning it counterclockwise. Carefully pull out screw. Note that the latter part of the screw is a bolt, which the trigger hinges upon. **(SEE PIC C . D)**

Remove trigger assembly by lifting it up and out of REV-i trigger frame. **(SEE PIC E)**

SOLENOID MAINTENANCE

The REV-i solenoid is a delicate electronic component that requires minimal maintenance or service. DP Engineering does not recommend frequent cleaning of this part, or its internals. The following instructions are provided for reference and for expert airsmiths only.

Once the REV-i body and trigger frame are separated, locate the solenoid within the marker body. Note the wiring harness connecting the solenoid to the main circuit board. **(SEE PIC A)**

Gently secure the base of the connectors and pull up to remove the plugs. DO SO ONE AT A TIME. It may be helpful to use needle nose pliers. Note the location and direction of the connectors on the circuit board for reassembly. **(SEE PIC B)**

With the connectors dislodged, turn the REV-i body so that the underside is facing up. **(SEE PIC C)**

Using (5/65") allen wrench key, locate and remove both screws securing the solenoid to the marker body. **(SEE PIC D)**

SOLENOID MAINTENANCE (CONTINUED)

5. Once both screws are removed, gently lift and remove the solenoid. **(SEE PIC E)**

6. Place solenoid on a flat surface, with the wiring harness side facing down and solenoid disassembly screw facing up.

7. Secure base of solenoid casing with an adjustable wrench (not provided). Using a slotted (flathead) screwdriver, remove screw carefully by turning it counterclockwise. Be extremely careful not to strip the screw. **(SEE PIC F)**

8. Remove solenoid spring. **(SEE PIC G)**

SOLENOID MAINTENANCE (CONTINUED)

9. With thin tweezers or needle nose pliers, carefully remove the solenoid piston by gently securing the tip and pulling it out. **(SEE PIC H)**

10. Carefully inspect and clean solenoid piston o-rings. Make sure the o-rings are not cracked, broken, or show signs of wear. Replace parts if necessary.

11. With a cotton swab, lightly apply a small amount of DP-40 lube to the solenoid piston assembly. **(SEE PIC I)**

12. Replace in reverse order.

WARNING
NEVER USE FORCE WHEN REMOVING OR REINSTALLING THE SOLENOID AND ITS SENSITIVE INTERNALS. BE CAREFUL NOT TO BEND, TWIST, OR BREAK DELICATE WIRES, AS DOING SO MAY RENDER THE UNIT INOPERATIVE OR CAUSE IT TO MALFUNCTION.

RAPS™ FLIP LEVER ASA REMOVAL AND MAINTENANCE

The RAPS™ ASA was designed to be virtually maintenance free. However, it may be necessary to occasionally clean and inspect for debris or damage, as either may cause malfunction or leaking of air.

Remove macro-line from RAPS™ ASA. **(SEE PIC A)**

Remove butterfly grip panels from trigger frame.

Disconnect solenoid wiring harness from circuit board. **(SEE PIC B)**

Locate the three screws securing circuit board to trigger frame and unscrew using a crosshead (Phillips) screwdriver. Carefully remove the circuit board from the trigger frame. **(SEE PIC C)**

Locate front and back screws within grip frame as illustrated, and unscrew with (3/32") allen key wrench. **(SEE PIC D)**

RAPS™ FLIP LEVER ASA REMOVAL AND MAINTENANCE (CONTINUED)

6. Slide RAPS™ ASA forward on rail to remove from frame. **(SEE PIC E)**

7. Locate hex screw on RAPS™ ASA casing.

8. Using (5/64") allen key wrench, loosen and remove screw by turning it counterclockwise. **(SEE PIC F)**

9. Remove RAPS™ lever and piston from RAPS™ casing as shown.

10. Check spring for proper tension. Replace if worn or damaged.

11. Use a lightly dampened cloth and/or cotton swab to remove debris or grime from all RAPS™ ASA compenents, including the piston, spring, lever, and casing. **(SEE PIC G)**

RAPS™ FLIP LEVER ASA REMOVAL AND MAINTENANCE (CONTINUED)

12. Clean and inspect o-ring located on the base of the piston. Replace o-ring if it appears worn, cracked, or damaged. Using a cotton swab, apply a small amount of DP-40 lubricant on the o-ring. **(SEE PIC H)**

13. Make sure the spring is properly seated on the piston, then reassemble the RAPS™ ASA in the reverse order of assembly. **(SEE PIC I)**

WARNING
REMEMBER TO DE-GAS THE REV-I BEFORE SERVICING THE RAPS™ ASA. FOLLOW INSTRUCTIONS PREVIOUSLY OUTLINED ON PAGE 41 TO SAFELY AND PROPERLY REMOVE EXCESS AIR FROM THE MARKER.

STATEMENT OF LIABILITY

The manufacturer assumes no responsibility for this product's safe operation upon sale or distribution. PROPERTY DAMAGE, BODILIY INJURY, OR DEATH could occur due to misuse, abuse or failure to follow the manufacturer's instructions stated in this manual. The manufacturer will assume no responsibility for physical injury or property damage resulting from the use of this marker. The information in this document is subject to change without prior notice. The manufacturer assumes no responsibility for any errors that may appear in this document.

DISCLAIMER

Notice is hereby given that this owner's manual is part of the article owned in whole by the manufacturer, known as indicated by this disclaimer and all illustrations within the manual. All rights for manufacturing and reproducing of such articles or any part thereof are reserved by the manufacturer. Neither said article nor any part thereof may be manufactured or reproduced in any way except by the written authorization of the manufacturer. All proprietary truths and information are the sole property of the manufacturer.

LIMITED LIFETIME WARRANTY

DANGEROUS POWER™ warrants this REV-i paintball marker, to the initial retail purchaser, to be free from defect in original materials and/or workmanship for the lifetime of the marker, with the following exceptions:

Disposable parts (batteries, o-rings, seals, micro switch, air pressure hose, rubber and/or plastic material parts, etc.) are not included in this limited lifetime warranty.
Electronic parts on this marker are fully warranted for 30 days from the original date of purchase.
Bolt and striker systems of this marker are fully warranted for 6 months from the original date of purchase.
Surface damages (scratches and nicks) or operation failure due to accident, neglect, modification, normal wear, operator error, maintenance by anyone other than an authorized dealer or agent, misuse, improper disassembly and reassembly, are expressly not covered under this warranty.

Purchaser is responsible for all rendered services not covered under this limited lifetime warranty, including any applicable shipping costs, labor, and/or installation.

DANGEROUS POWER™ reserves the right to determine the legitimacy of claimed defective original parts and their eligibility for coverage under the terms of this warranty. DANGEROUS POWER™, its authorized dealers, affiliates, and/or agents, will not be held liable under this warranty, state, federal, or common law for any product failure, personal injury, or property damage resulting from improper use and/or alteration of this product. Any attempt to alter the trigger assembly will instantly void your warranty and may result in serious injury. Any attempt to alter basic marker parts without prior written consent from the manufacturer will result in automatic default of all expressed warranties.

This limited lifetime warranty is non-transferable and is valid only upon presentation of a completed warranty registration card and original proof of purchase. There are no other warranties or guarantees, expressed or implied, made by the manufacturer on this paintball marker.

PAINTBALL MARKERS ARE NON-REFUNDABLE AND ARE NOT SUBJECT TO EXCHANGE FROM MANUFACTURER.

JP ENGINEERING

Product Registration Card

Fill out all of the information below completely. To activate your warranty, visit www.dangerouspower.com and click on “SUPPORT” to register your product within 7 days of purchase. Keep this card and your receipt or proof of purchase - you will be asked to include both when sending in your product for warranty service.

Name _____

Address _____ Apt/Suite #_____

City _____ State _____ Province _____

Zip/Postal Code _____ County _____ Country _____

Phone (_____) _____ Fax (_____) _____

Email _____

Name of Product Purchased _____

Date of Purchase _____ (dd/mm/yy) Product Color _____

Place of Purchase_____

Product Serial Number (if applicable) _____

I guarantee all of the information completed above to be true and correct to the best of my knowledge.

Signature _____

Date _____

Visit www.dangerouspower.com for more information on how to claim warranty.

NOTES:


ENGINEERING