PLANET ECLIPSE: GEO 4

USER MANUAL / ENGLISH

GEO IV

.68 CAL
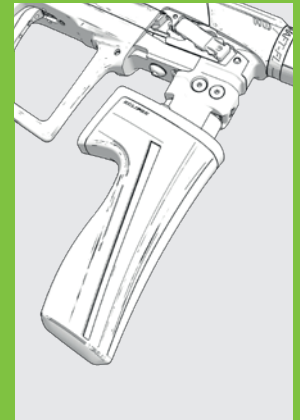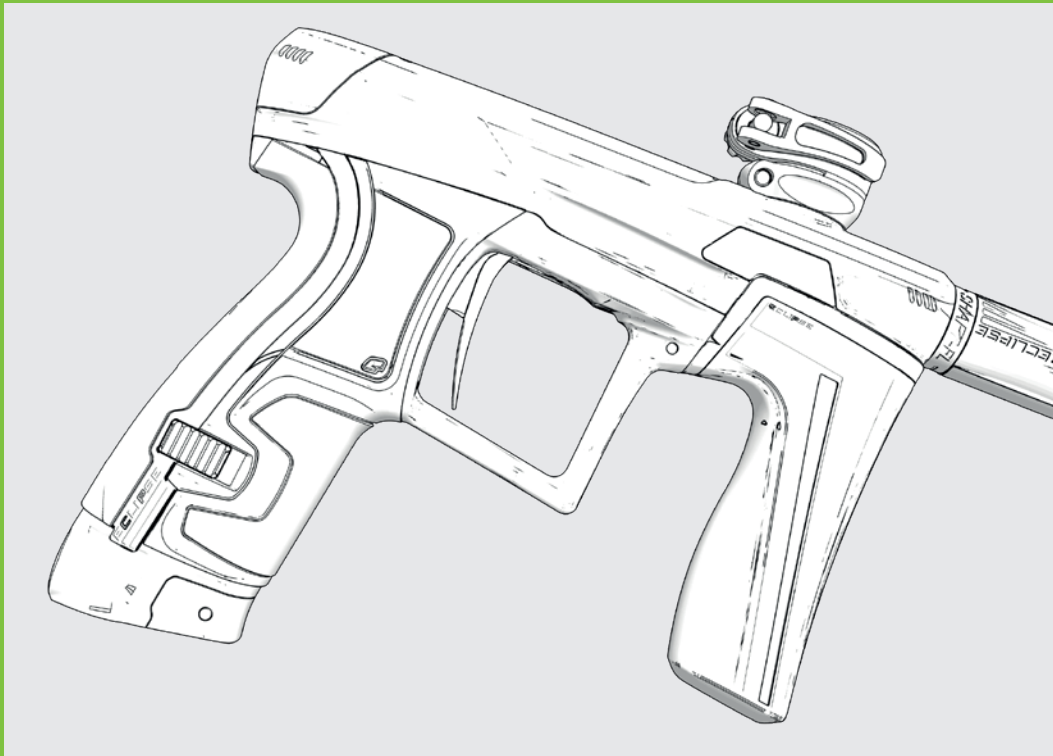
POWERED BY IV CORE

⚠ **THE PLANET ECLIPSE GEO 4 IS NOT A TOY. PAINTBALL SAFETY RULES MUST BE FOLLOWED AT ALL TIMES.**

⚠ Careless or improper use of the marker, including failure to follow instructions and warnings within this User Manual could cause serious injury or even death.

⚠ Do not remove or deface any warnings attached to the marker.

⚠ Paintball industry standard eye/face/ear and head protection designed specifically to stop paintballs and meeting ASTM standard F1776 (USA) or CE standard (Europe) must be worn by the user and any person within range. Proper protection must be worn during assembly, cleaning and maintenance.

⚠ Hearing protection should be worn.

⚠ Never shoot at a person who is not wearing proper protection.

⚠ Never look directly into the barrel of the marker. Accidental discharge into the eyes may cause permanent injury or even death. Never look into the barrel or breech area of the marker whilst the marker is switched on and able to fire.

⚠ Keep the marker switched off until ready to shoot.

⚠ Treat every marker as if it is loaded and ready to fire.

⚠ The electronic On/Off button is the marker's disabling device, also known as a safety. Always switch the marker off when not in use.

⚠ Always fit a barrel-blocking device to the marker when not in use.

⚠ Always remove paintballs from the marker when not in use.

⚠ Do not field strip or remove any parts while the marker is pressurised.

⚠ Do not pressurise the marker without all the components of the marker correctly installed, as high-pressure gas may be emitted.

⚠ Do not fire the marker without the bolt correctly installed.

⚠ Never put your finger or any foreign objects into the paintball feed tube of the marker.

⚠ Never allow pressurised gas to come into contact with any part of your body.

⚠ Always remove the first stage regulator and relieve all residual gas pressure from the marker before disassembly.

⚠ Always remove the first stage regulator and relieve all residual gas pressure from the marker for transport and storage.

⚠ Always follow guidelines given with your first stage regulator for safe transportation and storage.

⚠ Always store the marker in a secure place.

⚠ Observe all local and national laws, regulations and guidelines.

WARNINGS
READ CAREFULLY BEFORE USE

⚠ Persons under 18 years of age must have adult supervision when using or handling the marker.

⚠ Only use professional paintball fields where codes of safety are strictly enforced.

⚠ Use compressed air/nitrogen only. Do not use any other compressed gas or pressurised liquid including CO2.

⚠ Always follow instructions, warnings and guidelines given with any first stage regulator you use with the marker.

⚠ Use 0.68 inch calibre paintballs only.

⚠ Always measure your marker's velocity before playing paintball, using a suitable chronograph.

⚠ Never shoot at velocities in excess of 300 feet (91.44 metres) per second, or at velocities greater than local or national laws allow.

⚠ Any installations, modifications or repairs should be carried out by a qualified individual at a licensed and insured paintball facility.

WARNING! ⚠

This user manual must accompany the product in the event of resale or new ownership. Should you be unsure at any stage you must seek expert advice.

This User Manual is in English.
It contains important safety guidelines and instructions. Should you be unsure at any stage, or unable to understand the contents of this manual you must seek expert advice.

Le mode d'emploi est en Anglais.
Il contient des instructions et mesures de sécurité importantes. En cas de doute, ou s'il vous est impossible de comprendre le contenu du monde d'emploi, demandez conseil à un expert.

Este manual de usuarios (operarios)
Usarios está en Inglés.Contiene importantes normas de seguridad e instrucciones. Si no está seguro de algùn punto o no entiende los contenidos de este manual debe consultar con un experto.

Diese Bedienungs - und Benutzeranleitung ist in Englisch.
Sie enthaelt wichtige Sicherheitsrichtlinen und - bestimmungen. Solten Sie sich in irgendeiner Weise unsicher sein, oder den Inhalte dies Heftes nicht verstehen, lassen Sie sich bitte von einen Experten beraten.

04 CONTENTS
GEO 4 USER MANUAL

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GEO IV

TECH
SUPPORT

WE GOT YOUR BACK!!!

OUR ARMY OF PLANET ECLIPSE PRO TECHS ATTEND PAINTBALL EVENTS ALL OVER THE WORLD TO MAKE SURE THAT YOU AND YOUR ECLIPSE MARKER ARE FIRING ON ALL CYLINDERS, AT ALL TIMES, IN ALL GAME SCENARIOS.

FOLLOW OUR OFFICIAL PLANET ECLIPSE SOCIAL MEDIA CHANNELS TO KEEP UP TO DATE WITH OUR TECH SUPPORT EVENTS CALENDAR.

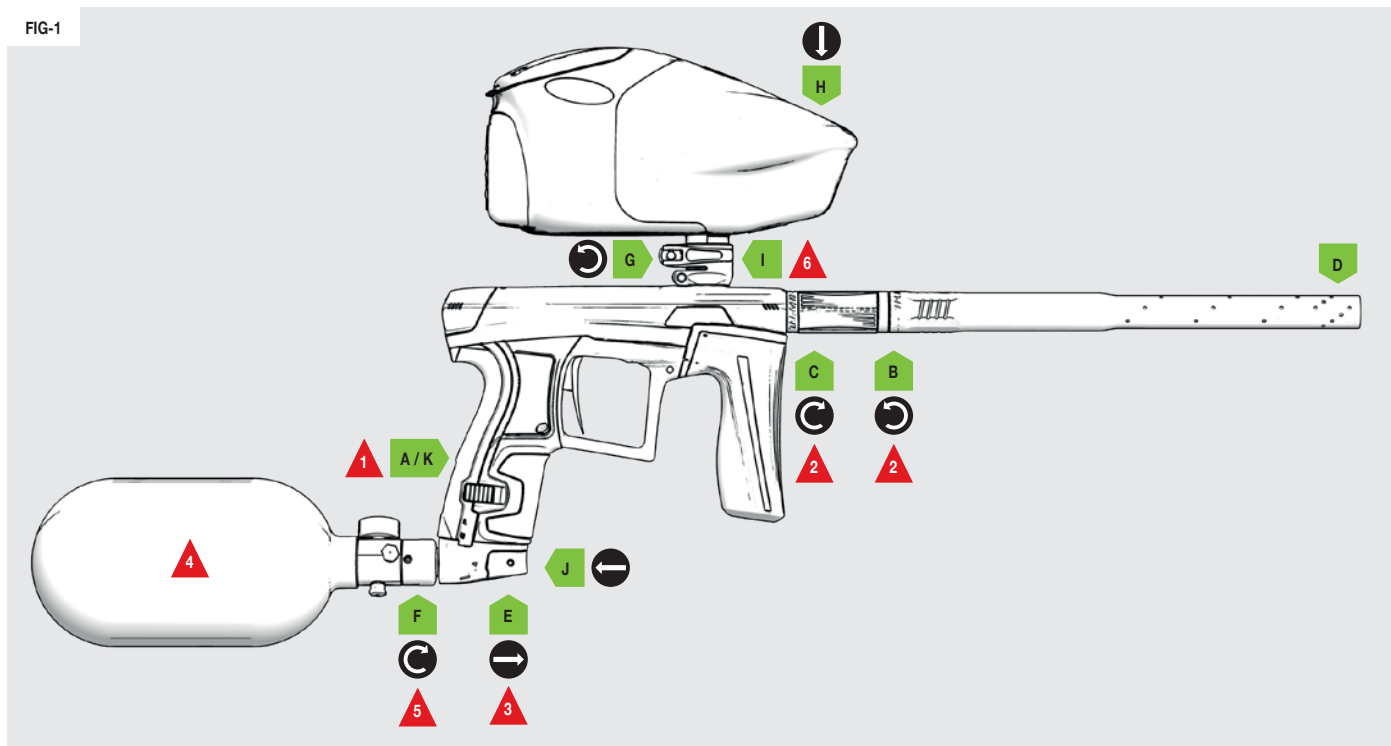**FIG-1**

INTRODUCTION
SETTING UP

___

FIG-1

A **Ensure that the marker is switched OFF before you begin.**

B **Connect both parts of the barrel together.**
Rotate the barrel tip counter-clockwise onto the barrel insert.

C **Attach the complete barrel to the marker.**
Rotate the barrel clockwise into the marker body.

D **Fit a barrel blocking device for safety.**

E **Ensure the marker is de-gassed.**
Push in and hold the POPS button and pull the POPS bonnet away from the POPS body.

F **Attach a pre-set air system.**
Rotate the air system clockwise into the POPS body.

G **Loosen the clamping feed-neck.**
Open the feed-neck lever away from the feed-neck.
Rotate the feed-neck lever screw counter-clockwise.

H **Attach a loader.**
If the feed-neck is too tight, loosen the clamping feed-neck more.

I **Secure the loader.**
Rotate the feed-neck lever screw clockwise to tighten.
Close the feed-neck lever to secure.

J **Gas the marker.**
Push the POPS bonnet into the POPS body until it engages.

K **Switch ON the GEO 4.**

1 **IMPORTANT!** To switch OFF/ON, see page 08.

2 **DO NOT** over-tighten the barrel.

3 **IMPORTANT!** Ensure that the marker is de-gassed when setting up.

4 **NEVER** use CO2. Compressed air or nitrogen only.

5 **DO NOT** use a preset regulator that outputs over 650 psi.

6 **DO NOT** over-tighten the feed-neck. This may damage the marker or the loader.

WARNING! ⚠

Always make sure the marker is Off with a barrel blocking device installed and that no paintballs are in the marker or loader before installing an air system.

Compressed air and nitrogen systems can be extremely dangerous if handled or used incorrectly.

Only attach an air system certified for use within the country of use.

Never add lubricants or grease into the fill adaptor of the air system regulator.

Ensure that all screws are tightened and no parts are loose before installing an air system.

Do not pressurise the marker without the bolt system correctly installed, as high pressure gas will be emitted.

Do not install a compressed air system or load paintballs into the marker until you feel confident with your ability to handle the marker safely and responsibly.

INTRODUCTION
SWITCHING ON/OFF

FIG-1

FIG-1

The navigation console houses the LCD screen A and the navigation buttons: Up B Down C and Select D .

Use the navigation console to switch the GEO 4 On or Off and change the marker settings.

Switching ON
Press and hold the Select button D – or double-click it [1] – until the Eclipse logo is displayed.

Switching OFF
Press and hold the Select button D – or double-click it [1] – until the TURN OFF option is displayed. Press the Select button again once to switch off.

Firing the marker
Pull the trigger to fire the marker. The breech sensor (BS) will indicate whether the marker is able to fire.

To switch the breech sensor ON/OFF push and hold B for 0.5 seconds when the marker is switched on. See page 10 for BS indicator details.

1   The double-click feature can be disabled in the HARDWARE menu (see page 35).

WARNING! ⚠️

DO NOT dry fire your marker as this may lead to damage over a sustained period of dry firing.

FIG-1

INTRODUCTION
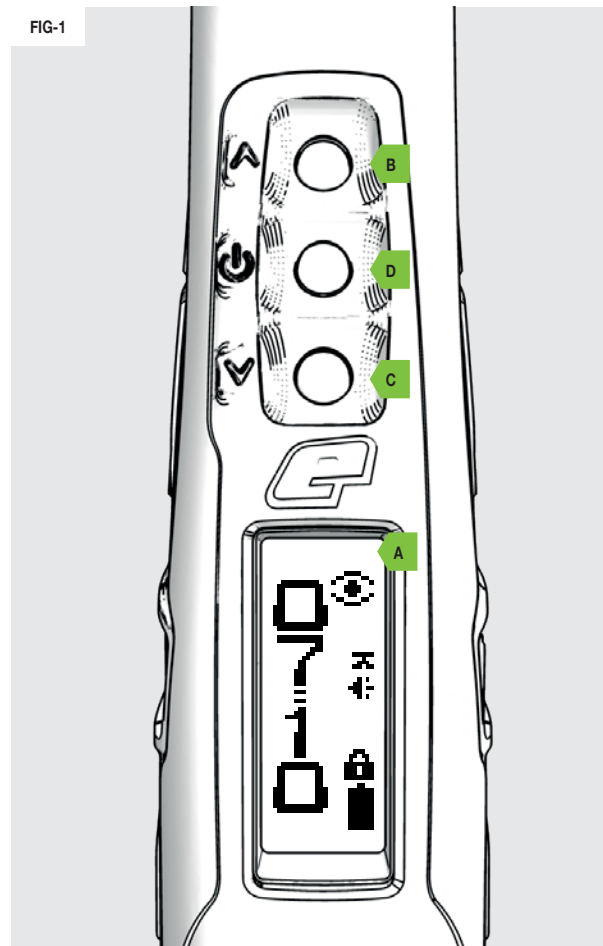## USER INTERFACE RUN-SCREEN

FIG-1

Once powered-up a run screen will be displayed. There are a number of run screens and, with the exception of the splash screen, all have the same layout.

A Run screen specific information.
   Tap the Up button to cycle between firing mode, game timer, shot count, peak ROF, average ROF and splash run screens.

B The breech sensor (BS) indicator (see page 10 for BS indicators and their meanings).

C The trigger detection indicator (see page 11).

D The sound indicator.

E The lock indicator (to change the lock state see page 13).

F The battery level indicator (see page 13).

FIG-1

GE○IV
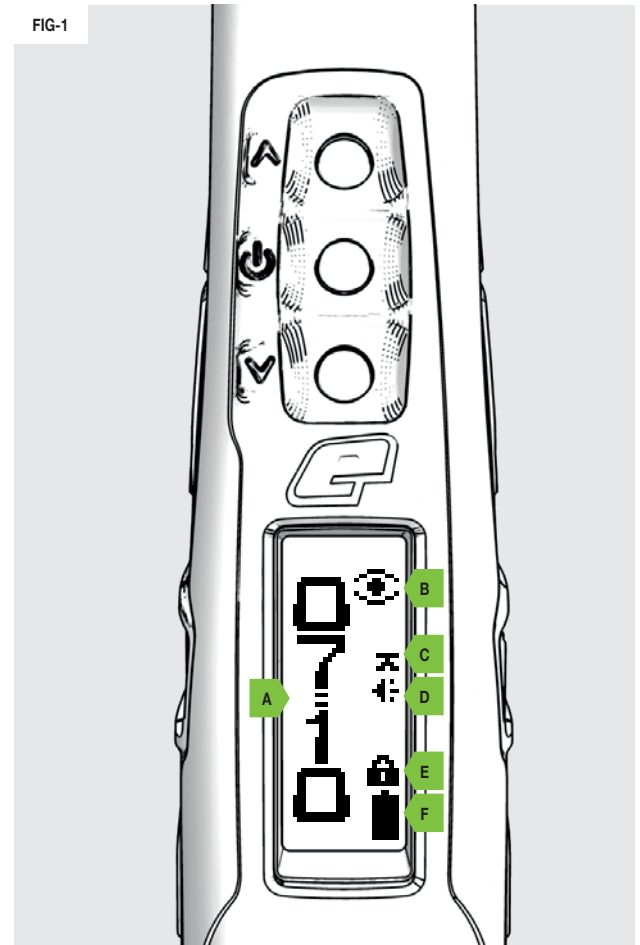
INTRODUCTION
BREECH SENSOR (BS) INDICATOR

FIG-1

FIG-1

The BS indicator A displays the various states of the breech sensor.

BS enabled and a ball is detected
The marker can be fired up to the selected rate of fire.

BS enabled and NO ball is detected
The marker cannot be fired.

BS disabled
The marker can be fired up to the rate of fire set by the BS OFF ROF parameter (see page 27).

BS enabled in training mode
Training mode is enabled and simulates firing up to the selected rate of fire.

BS disabled in training mode
Training mode is enabled and simulates firing up to the rate of fire set by the BS OFF ROF parameter.

BS fault has been cleared and a ball is detected
The marker can be fired up to the selected rate of fire.

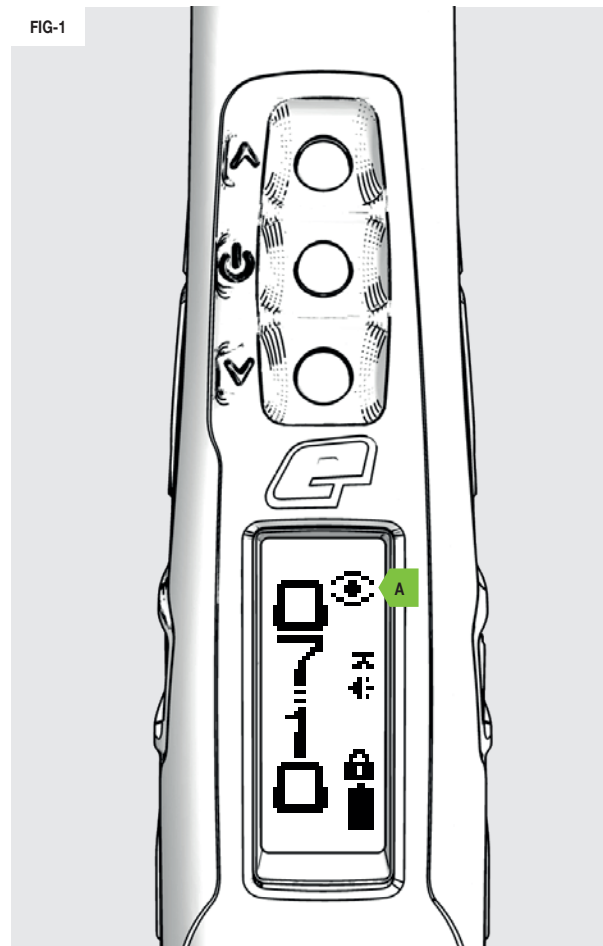**BS fault has been cleared and NO ball is detected**
The marker cannot be fired.

BS fault detected
Breech Sensor is temporarily disabled. The marker can be fired up to a rate of fire that is 2bps lower than that set by the BS OFF ROF parameter.

INTRODUCTION
TRIGGER DETECTION INDICATOR

FIG-1

—

FIG-1

The trigger detection Indicator (TDI) `A` relays the state of the trigger, ranging from fully released to fully depressed:

OPTO sensor selected, reading 0%
OPTO reads 0% meaning the trigger is fully released.

OPTO sensor selected, reading below RELEASE point
OPTO senses that the trigger is in a released state.

OPTO sensor selected, reading above PULL point
OPTO senses the trigger is in a pulled state.

OPTO sensor selected, reading 100%
OPTO reads 100% meaning the trigger is fully depressed.

OPTO sensor selected, reading mid-range
OPTO senses that the trigger is in a half-pulled state.

Microswitch selected, actuated
The trigger is in a pulled state.

Microswitch selected, non actuated
The trigger is in a released state.

The OPTO is the factory default trigger sensor setting. This can be changed to the microswitch via the HARDWARE menu (page 33).

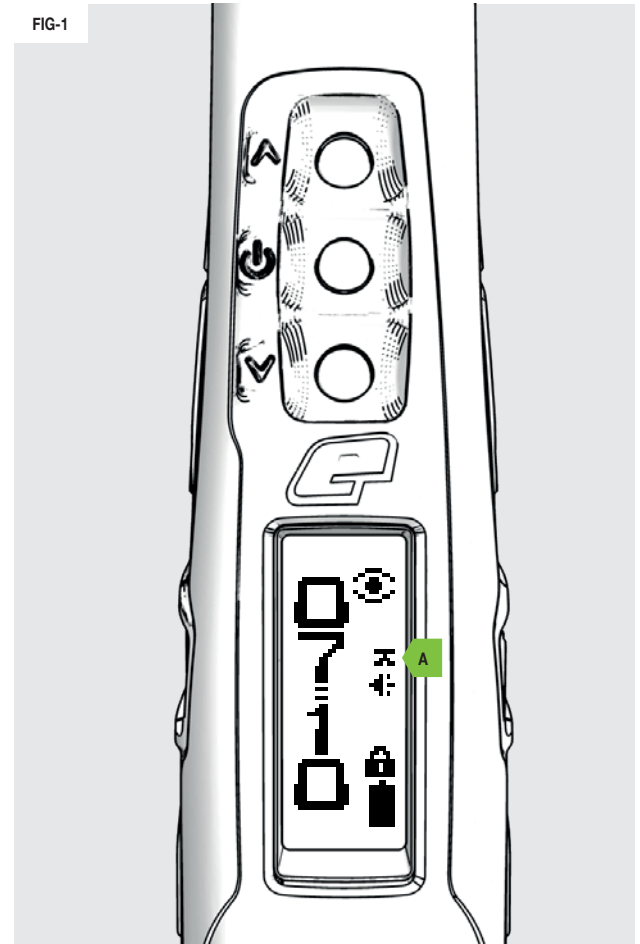# 12 INTRODUCTION
SOUND INDICATOR

FIG-1

—

FIG-1

The Sound Indicator
The sound indicator A shows the status of the sound system.
See page 33 for more details.

Sound enabled
Sound will be used to indicate certain events.

Sound disabled
Sound will not be used.
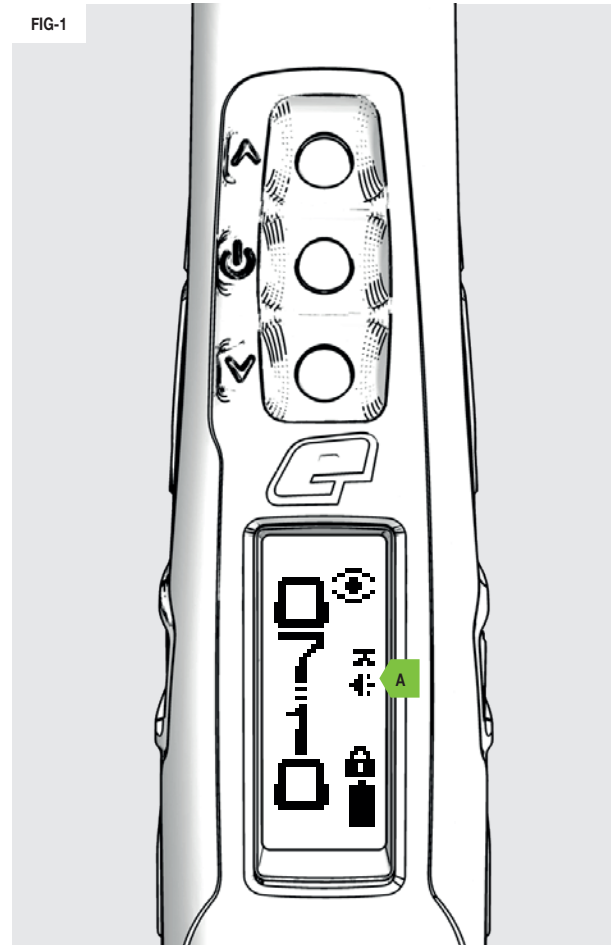
INTRODUCTION
TOURNAMENT LOCK / BATTERY INDICATOR

FIG-1

The Lock Indicator A shows the status of the Tournament Lock (see page 17).

Locked
Firing mode parameters cannot be changed. Tournament legal state.

Unlocked
Firing mode parameters can be changed.

The Battery Indicator
The Battery Indicator B shows the level of charge the battery has.

Full battery
The battery is fully charged.

Drained battery
Battery is at approximately 50% of useful charge.

Battery circuit fault
The battery level cannot be determined.

Estimated battery
The battery level cannot be determined until the marker is fired.

FIG-1

GEO IV
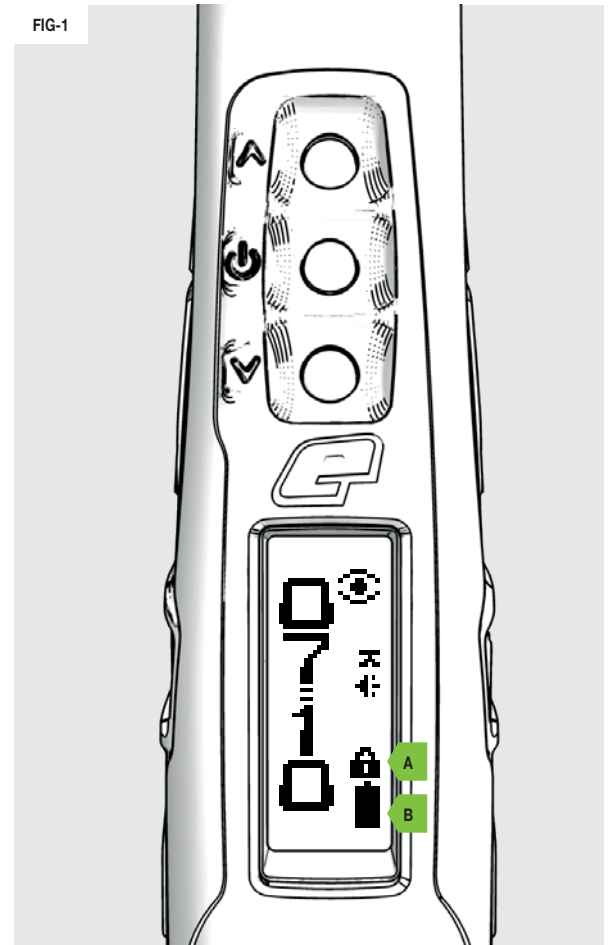
INTRODUCTION
FIRMWARE VERSION CHECK / UPDATE

FIG-1

FIG-1

To check which version of firmware your marker is currently running simply follow the sequence below.

1. Push and hold the Select button **A** to switch the marker ON.
2. When the GEO 4 logo appears let go of the Select button then push and hold immediately to freeze the version screen.
3. The version screen (Fig-2) will now be displayed. Release the Select button to continue the start-up process.

FIG-2

The Version number **B** indicates the software version of the marker.
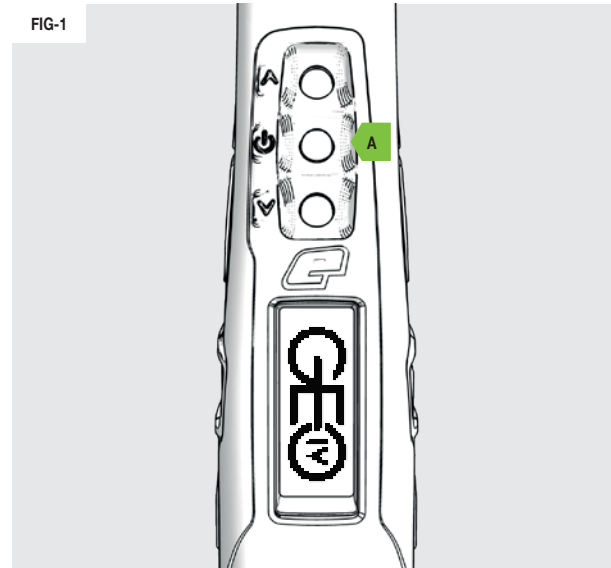
FIG-2
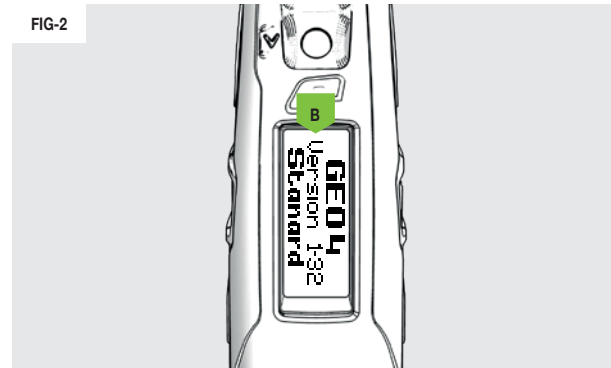
FIG-1

The GEO 4 velocity adjustment screw is accessed from the underside of the POPS bonnet.

With the POPS bonnet in the rear (engaged) position, insert a 1/8 hex key `A` into the velocity adjuster screw `B` to adjust the velocity.

1. Turn the hex key clockwise to reduce velocity.
2. Turn the hex key counter-clockwise to increase velocity.
3. Fire two clearing shots after each velocity adjustment for an accurate velocity reading.

⚠ **1**   **DO NOT** turn the adjustment screw in too far. This will prevent the marker from firing.

FIG-1

WARNING! ⚠

DO NOT exceed 300FPS.
Always wear correct protective equipment when firing your marker.
NEVER leave the marker gassed up when unloading.
NEVER point your marker in the direction of other people when not on the field.

FIG-1

The spring return screw A controls the spring strength of the trigger return. Clockwise increases the strength, counter-clockwise decreases it.

The trigger shoe retaining screw B is only to be removed to change to a different style trigger shoe (sold separately). Remove the frame to access the screw. Counter-clockwise removes the screw, clockwise tightens it.
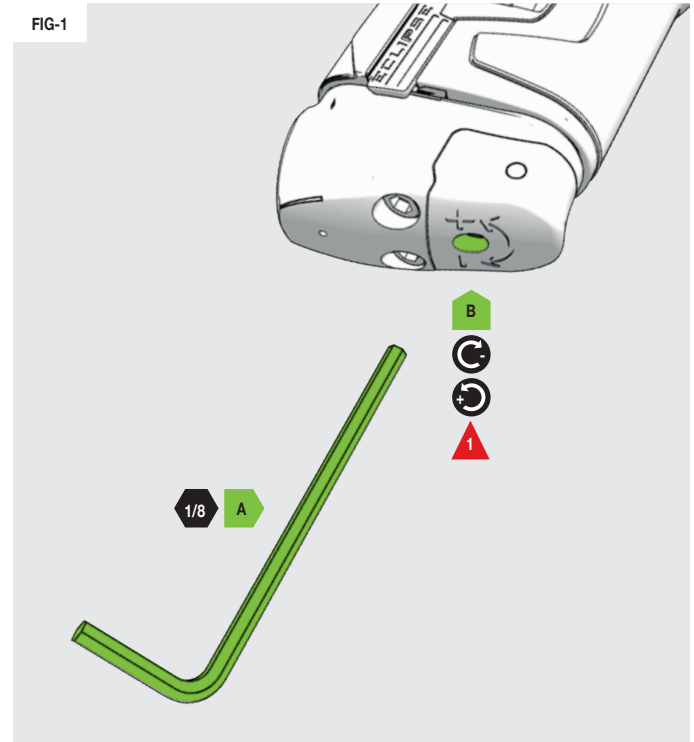
The pre-travel screw C adjusts the distance the trigger travels before being pulled. Clockwise reduces the amount of travel (shortening the trigger), counter-clockwise increases the trigger pull distance.

The microswitch screw D adjusts the distance between the trigger and microswitch. Clockwise reduces the distance, counter-clockwise increases it.

The magnet adjuster screw E adjusts the strength of the trigger return. Clockwise increases the strength, counter-clockwise reduces it.

The post-travel screw F adjusts the distance the trigger travels once pulled. Clockwise reduces the amount of travel (shortening the trigger), counter-clockwise increases the trigger pull distance.
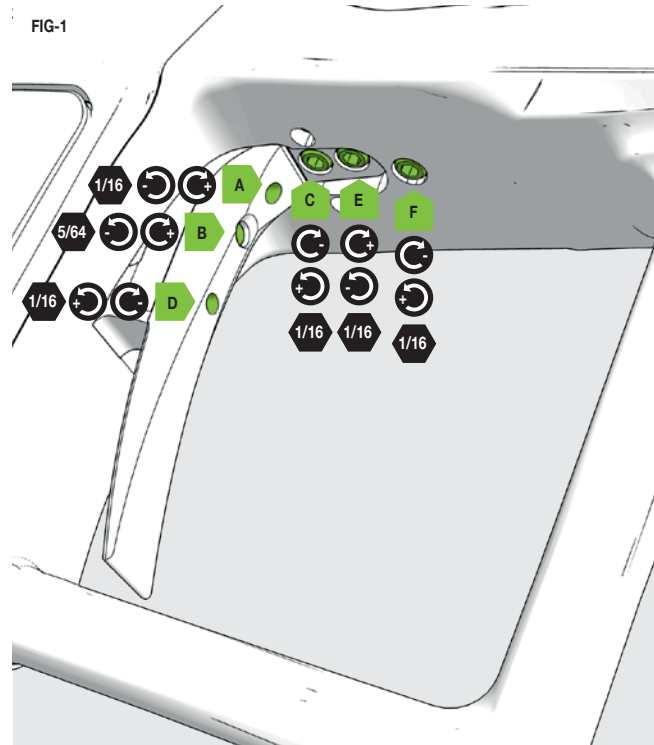
WARNING! ⚠

Do not wind the screws in too far as this may prevent the marker from firing or even damage it. If the pre-travel screw is wound in too far this could cause the marker to fire unintentionally.

FIG-1

INTRODUCTION
THE TOURNAMENT LOCK BUTTON

FIG-1

To access the tournament lock button push the grip release tabs (both sides) A towards the front of the frame to release the rear grip section B then simply pull and remove the rear grip.

FIG-2
Open and remove the front grip section C .

FIG-3
You can now locate the tournament lock button D .

FIG-4
Push the tournament lock button E to toggle the tournament lock state – which will be displayed on the LCD. See page 13 for more.

Replace the rubber grips as per **FIG-1** and **FIG-2**.

FIG-1

FIG-2

FIG-3

FIG-4
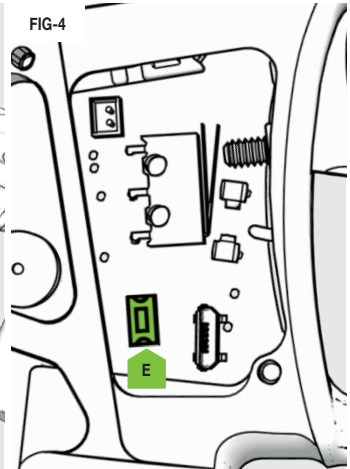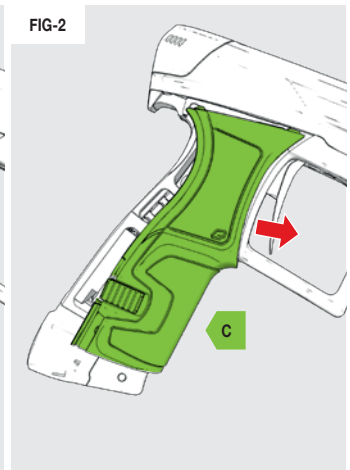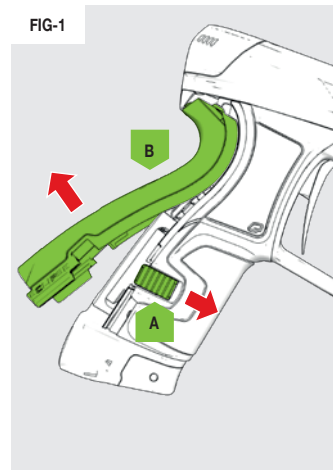
WARNING! ⚠

Always ensure the marker is made safe before changing the tournament lock state to avoid accidentally firing the marker.
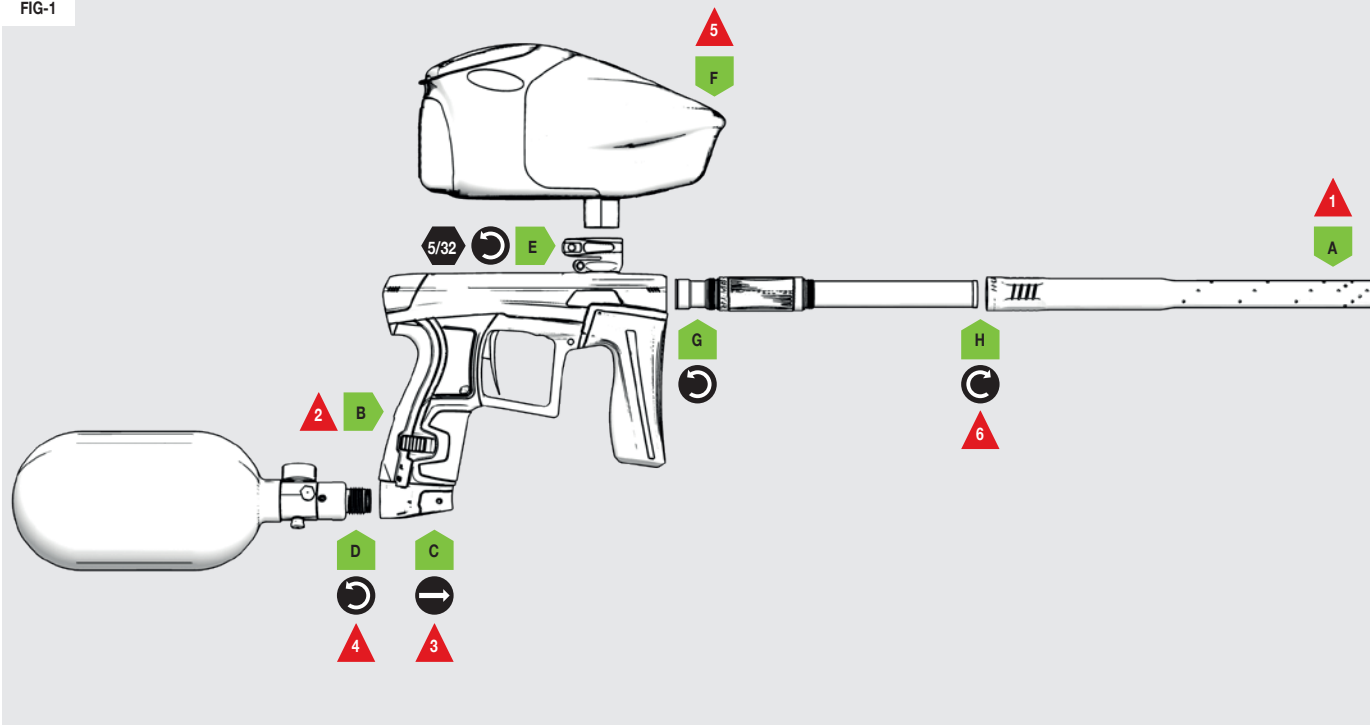
GEO IV

FIG-1

FIG-1

A **Ensure that a barrel blocking device is still fitted for safety.**

B **Switch the marker OFF.**

C **De-gas the marker.**
Push in and hold the POPS button and pull the POPS bonnet
away from the POPS body.

D **Remove the pre-set air system.**
Rotate the air system counter-clockwise from the POPS body.

E **Loosen the clamping feed-neck.**
Open the feed-neck lever away from the feed-neck.
Rotate the feed-neck lever screw counter-clockwise.

F **Remove the loader.**
If the feed-neck is too tight, loosen the clamping feed-neck screw.

G **Remove the barrel from the marker body.**
Rotate the barrel counter-clockwise to remove.

H **Remove the barrel tip from the barrel insert.**
Rotate the barrel tip clockwise to remove.

1 **IMPORTANT!** Extra precaution to avoid injury.

2 **IMPORTANT!** To switch OFF/ON, see page 08.

3 **IMPORTANT!** Always de-gas before unloading.

4 **IMPORTANT!** Always remove air system before unloading.

5 **IMPORTANT!** Always remove any paintballs from the breech of the
marker once the loader has been removed.

6 **IMPORTANT!** The barrel tip is reverse threaded so unscrew it
CLOCKWISE.

WARNING! ⚠️

Always make sure the marker is Off with a barrel blocking device installed and
that no paintballs are in the breech or loader before unloading.

Compressed air and nitrogen systems can be extremely dangerous if handled
or used incorrectly.

NEVER leave the marker gassed up when unloading.

NEVER point your marker in the direction of other people when not on the field.

Remove any paintballs from the breech before storing your marker.

FIG-1

The Solenoid Flow Restrictor (SFR) A controls the exhaust flow from the bolt through the solenoid. Adjusting the SFR will change the speed of the bolt's forward stroke.

Use a hex key B and turn clockwise to decrease the flow (reducing the speed of the bolt) or counter-clockwise to increase the flow (increasing the speed of the bolt).

Minimum flow (fully clockwise) will improve the smoothness of the firing cycle but will lower the cycling rate.

Maximum flow (fully counter-clockwise) will reduce the smoothness of the firing cycle but increase the cycling rate.

The SFR flow rate can be set anywhere between maximum and minimum flow.

1 **ALWAYS** chronograph your marker once any changes have been made. Changes to the SFR flow can directly affect the velocity of the paintballs.

FIG-1
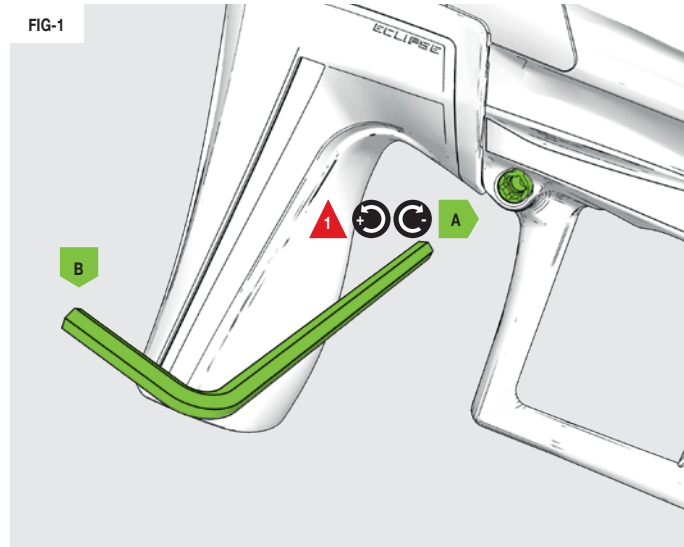
WARNING!

Setting the flow restrictor too low (especially in extreme weather conditions) may result in: low velocity, inconsistent velocity or preventing the bolt from cycling. f this occurs, increase the SFR flow setting.

1 Your marker must be clear of all paint and propellant during transportation or storage.

2 Make sure the marker marker is switched off.

3 Remove the barrel from the marker.

4 Make sure the marker is clean of any paint residue, dirt and moisture.

5 Store your marker in a clean, cool, dry place.

6 Keep your marker away from any unauthorized and unsafe users.

7 Remove the batteries when storing your marker to prevent unauthorized use.

8 Protect your marker from excessive heat during transportation.

9 When transporting a paintball marker by air, check with the airline regarding their policies on transporting paintball equipment as hold luggage before arriving at the airport.

10 Observe and obey all local and national laws concerning the transportation of paintball markers.

11 Use the box in which the marker was originally supplied to protect the marker against rough handling during transport.

WARNING!

Never carry your marker un-cased when not on a playing field. The non-playing public and law enforcement personnel may not be able to distinguish between a paintball marker and a real firearm. For your own safety and to protect the image of paintball, always carry the marker in a suitable case such as the one in which it was supplied.

MAINTENANCE
ONLINE MAINTENANCE VIDEOS

For step-by-step maintenance videos to help you service and maintain your marker check out our YouTube channels below.

From simple, to more advanced maintenance videos, we got your back!
YOUTUBE.COM/PLANETECLIPSETV

For new products, documentaries and other cool video features visit:
YOUTUBE.COM/PLANETECLIPSE

FIG-1

The marker can be configured through editable parameters that are arranged in a menu system.

To access the menu when the marker is on, push and hold the Select button until the TURN OFF menu item is displayed. Double-clicking will also access the menu if enabled. See page 35.

The top level menu shown opposite is comprised of a number of sub-menus and a number of editable parameters.

Some parameters affect the way the marker shoots. These parameters can only be modified when the tournament lock is off. See page 17.

The availability of some parameters and sub-menus is dependent upon the setting of other parameters (e.g. the RAMP SETUP menu is only available when the FIRE MODE is set to RAMP).

Select EXIT to return to the previous menu level, or – if already on the top level – to leave the menu system.

Select TURN OFF to turn off the marker.

The layout and parameters shown in this manual are correct at the time of printing.

FIG-1

ELECTRONICS
NAVIGATING THE USER INTERFACE
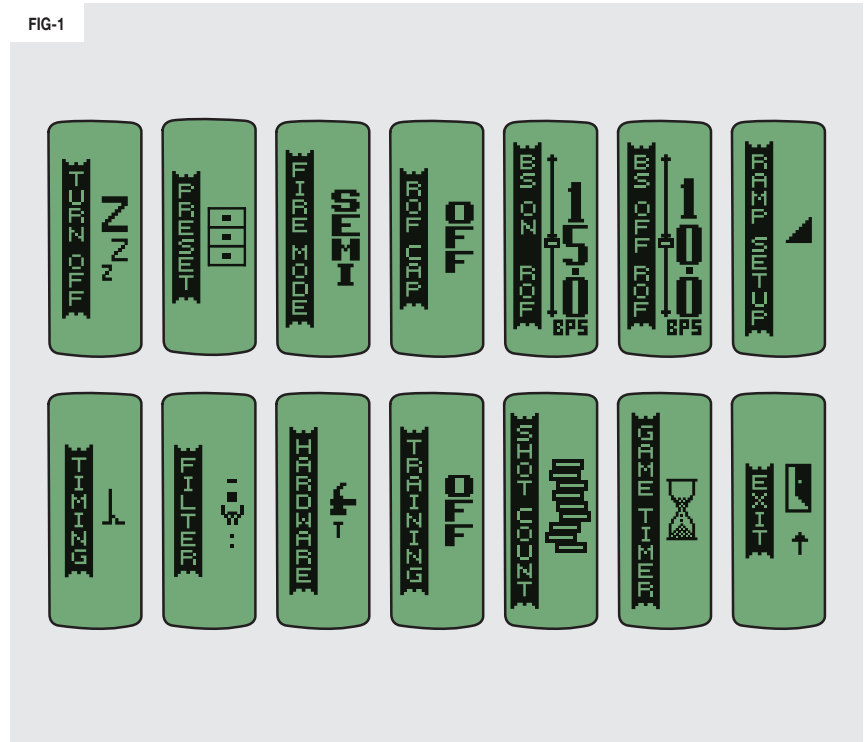
FIG-1

FIG-1

Once in a menu use the Up B and Down C buttons to navigate through the menu items.

Use the Select button A to select the item. If the item is an editable parameter then it can be adjusted with the Up and Down buttons and accepted with another push of the Select button.

FIG-2 - Navigation example

1   Marker is On.

2   Push and hold Select button until the TURN OFF menu item appears.

3   Up or Down buttons are used to find TRAINING.

4   Select button selects the TRAINING parameter for editing.

5   Up and Down buttons scroll the TRAINING parameter options (ON/OFF).

6   Select button confirms the desired option.

7   Up or Down buttons are used to find exit.

8   Select button saves the change and returns the user to the run screen.

FIG-2

GE IV

25 ELECTRONICS
USER INTERFACE PARAMETERS

FIG-1

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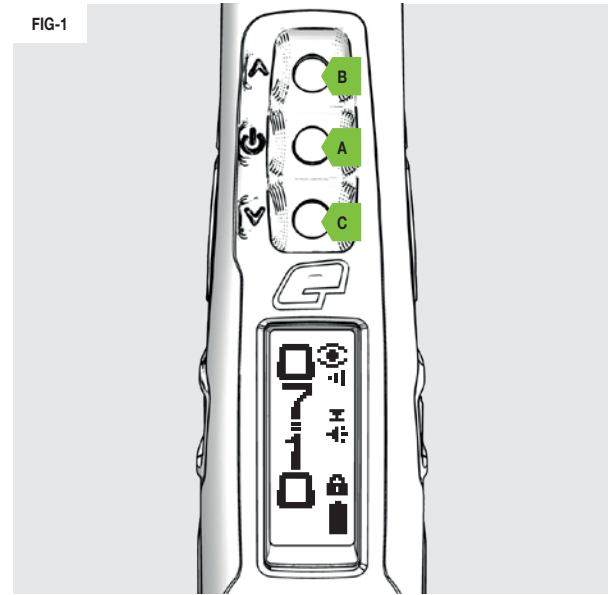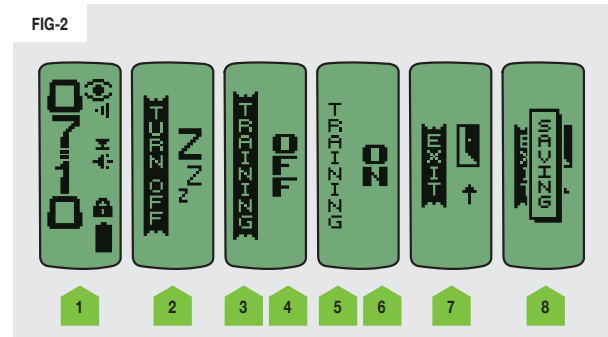
WHAT IS A PRESET?

A preset is comprised of all of the parameters that together control the way that the marker fires. These parameters are -

> FIRE MODE

> ROF CAP

> BS ON ROF

> BS OFF ROF

> RAMP TYPE

> RAMP RATE

> SEMI SHOTS

> KICK IN

> SUSTAIN

> RESTART

> TRAINING

Selecting a preset changes each of these parameters so your marker complies with the relevant league or event settings.

The factory defined presets have been created to comply with the most common rules around the world. These presets cannot be changed however they can be used as a starting point for customizing settings and if any preset parameters are changed then the preset name will change to CUSTOM.

There are also 2 user defined presets.
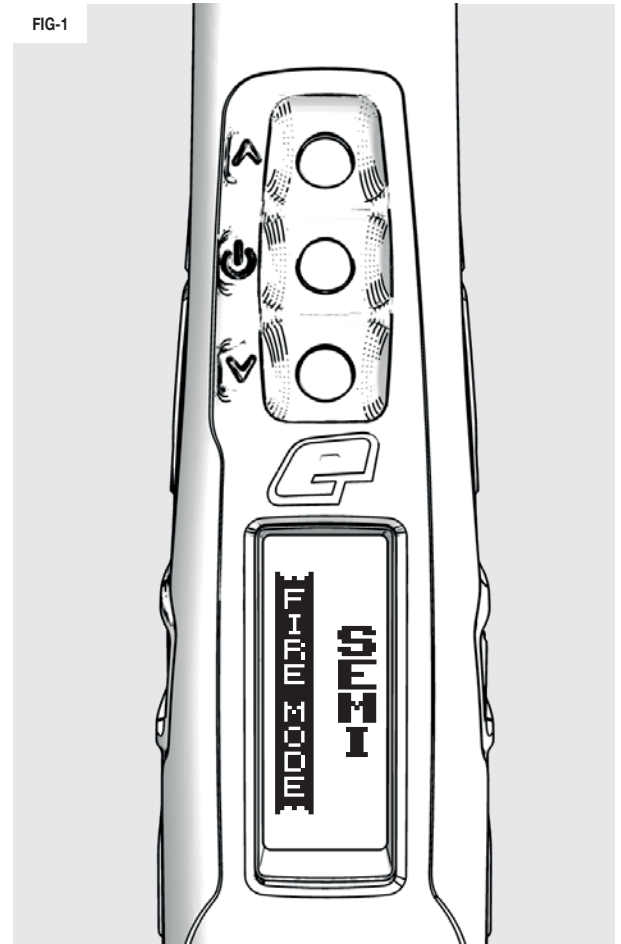
AVAILABLE PRESETS

The default list of presets are listed below:

> SEMI NC: Uncapped semi-automatic.
> SEMI 10: Semi-automatic capped at 10 bps.
> SEMI 15: Semi-automatic capped at 15 bps.
> NXL 2016: Ramping capped at 10.2 bps compliant with 2016 NXL Rules.
> PSP 2015: Ramping capped at 10.2 bps compliant with 2015 PSP Rules.
> RETRO: NXL style ramping capped at 5.5 bps.
> USER 1: User defined preset
> USER 2: User defined preset

Note: If the factory settings are restored using the RESET > FACTORY item in the HARDWARE menu then the user presets will be reset to the factory defaults.

FIG-1 PRESET PARAMETERS

Select the required preset from the list of available presets (above).[1, 2]

1   Some presets may only be available in certain countries and on some models of the GEO 4.

2   All presets are correct at the time of printing.

FIG-1

ELECTRONICS
USER INTERFACE PARAMETERS
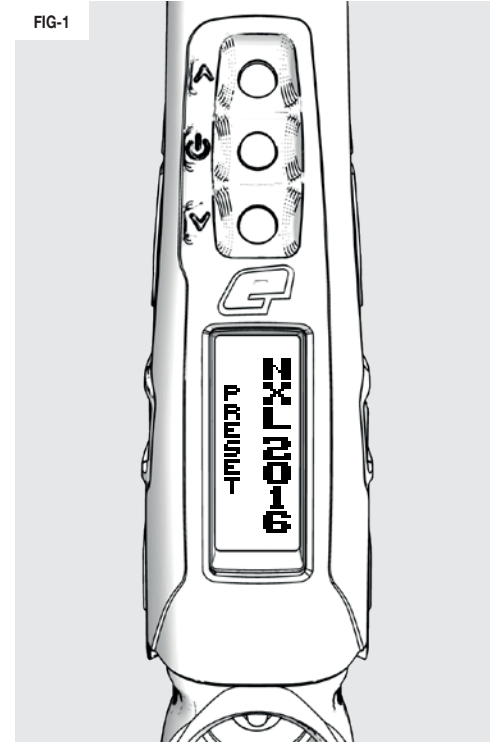
FIG-1 - FIRE MODE PARAMETER
Sets the firing mode of the marker.

> SEMI: 1 shot per trigger pull.

> RAMP: Ramping, multiple shots per trigger pull under certain conditions. See page 28.

FIG-1

FIG-2 - ROF CAP PARAMETER
The maximum rate of fire the marker can achieve.

> ON: ROF limited to the BS ON ROF value.

> OFF: ROF limited by loader speed.

FIG-2

FIG-3 - BS ON ROF PARAMETER
Sets the maximum rate of fire the marker can achieve with the breech sensor (BS) enabled. This parameter is only available if the ROF CAP is set to ON.

> Range: 4.0 - 20.0 bps (balls per second) in 0.1 increments. [1]

[1]   Always calibrate your ROF CAP parameters to the local field meter for consistency.

FIG-3

FIG-4 - BS OFF ROF PARAMETER
Sets the maximum rate of fire the marker can achieve with the breech sensor (BS) disabled. This should be set to the slowest feed rate of the loader in order to avoid chopping paintballs.

> Range: 4.0 - 15.0 bps (balls per second) in 0.1 increments. [1]

[1]   Always calibrate your ROF CAP parameters to the local field ROF meter to avoid penalties.

FIG-4

GEO IV

USER INTERFACE PARAMETERS

FIG-1 - RAMP SET-UP MENU
This menu is only available when RAMP has been selected as the FIRE MODE parameter.

FIG-2 - TYPE PARAMETER
Select the type of ramping required:

> STEP:
> The marker will fire in semi-automatic until a number of trigger pulls (set by SEMI SHOTS) have been made at a minimum pull rate (set by KICK IN). The marker will then fire at up to the maximum rate of fire (set by BS ON ROF) as long as the trigger is continually pulled at a required rate (set by SUSTAIN).

> LINEAR:
> The marker will fire in semi-automatic until a number of trigger pulls (set by SEMI SHOTS) have been made at a minimum pull rate (set by KICK IN). The rate of fire will then equal the rate of trigger pulls increased by a percentage (specified by RATE) up to a maximum rate of fire (set by BS ON ROF). Ramping is maintained as long as the trigger is continually pulled at a required rate (set by SUSTAIN).

FIG-3 - RATE PARAMETER
Only available when the RAMP TYPE parameter is set to LINEAR. This sets the percentage increase in rate of fire over rate of trigger pulls.

If the RATE is 50% and the trigger is pulled at 10 bps then the actual rate of fire is 15 bps (10 + 50%).

This parameter can be set between 0 and 100% in 10% increments.

FIG-1

FIG-2

FIG-3

ELECTRONICS
USER INTERFACE PARAMETERS

___
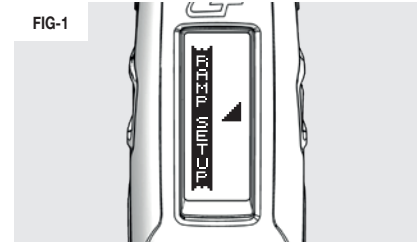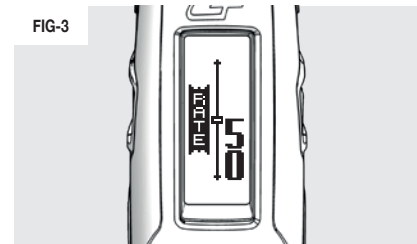
FIG-1

FIG-1 - SEMI SHOTS PARAMETER
This sets the number of shots in semi-automatic required at the KICK IN rate before ramping starts.

This parameter can be set between 3 and 9 pulls in 1 pull increments.

FIG-2

FIG-2 - KICK IN PARAMETER
This sets the rate at which the trigger has to be pulled in order to start ramping.

This parameter can be set between 3.3 and 10.0 pulls per second in 0.1 increments.

FIG-3

FIG-3 - SUSTAIN PARAMETER
This sets the rate at which the trigger must be continually pulled in order to maintain ramping.

This parameter can be set between 3.3 and 10.0 pulls per second in 0.1 increments.

FIG-4

FIG-4 - RESTART PARAMETER
This sets the amount of time that can elapse, after the final ramped shot is fired before ramping is reset and must be restarted again by meeting the defined conditions (above).

This parameter can be set between 0.0 and 1.0 seconds in 0.1 increments.

FIG-1

FIG-1 - TIMING MENU
The TIMING menu parameters control the energise time of the solenoid valve.

FIG-2

FIG-2 - DWELL PARAMETER
Sets the amount of time that the solenoid valve is energised during each firing cycle. Setting this parameter too low will result in low velocity shots and excessive velocity/shot fluctuations.

If set too high the marker will waste gas.

This parameter can be set between 15.0 and 35.0 milliseconds in 0.1 increments.

FIG-3

FIG-3 - FSD COMP PARAMETER
'First Shot Drop-Off' is a reduction in velocity of the first shot when the marker has not been fired for some time. This parameter adds extra DWELL time to the first shot in order to compensate.

This parameter can be set between 0.0 and 5.0 milliseconds in 0.1 increments.

FIG-4

FIG-4 - FSD DLY PARAMETER
This sets the amount of time that must pass before the FSD COMP is applied to a shot.

This parameter can be set between 00:00 and 04:00 minutes in 5 second increments.

GEO

FIG-1 - FILTER MENU

The FILTER menu parameters are used to tune the marker software filters to prevent the marker from firing unless all of the necessary conditions are met. Factory default settings are suitable for most set-ups however, certain loader and trigger set-ups may require filter adjustments.

FIG-1

FIG-2 - DEBOUNCE PARAMETER

This sets the amount of trigger bounce that is allowed and can be set from level 1 to level 9. Changing this parameter directly changes the PULL TM, RELEASE TM, PULL PT and RELEASE PT parameters.

> LEVEL1: Least filtering (most bounce).

> LEVEL9: Most filtering (least bounce).

FIG-2

FIG-3 - EMPTY PARAMETER

This sets the amount of time that the breech has to be empty before the marker registers that it is actually empty.

This can be set between 1.0 and 20.0 milliseconds in 0.1 increments.

FIG-3

FIG-4 - FULL PARAMETER

This sets the amount of time that the breech has to be full (paintball in place) before the marker registers that it is actually full.

This parameter can be set between 1.0 and 20.0 milliseconds in 0.1 increments.

FIG-4

___

FIG-1 - PULL TM PARAMETER
Sets the minimum amount of time that the trigger must be pulled for in order to be recognised as a valid trigger pull.

This parameter can be set between 3.0 and 20.0 milliseconds in 0.1 increments.

FIG-2 - RELEASE TM PARAMETER
Sets the minimum amount of time that the trigger must be released for in order to be recognised as a valid trigger release.

This parameter can be set between 3.0 and 25.0 milliseconds in 0.1 increments.

FIG-3 - PULL PT PARAMETER
This is only available if OPTO is enabled from the HARDWARE menu. It defines the point at which the trigger is considered pulled.

This parameter can be set between 51% and 99% in 1% increments.

FIG-4 - RELEASE PT PARAMETER
This is only available if OPTO is enabled from the HARDWARE menu. It defines the point at which the trigger is considered released.

This parameter can be set between 1% and 49% in 1% increments.

ELECTRONICS
USER INTERFACE PARAMETERS

FIG-1 - HARDWARE MENU

The HARDWARE menu contains items that are used to control the marker's electronic hardware.

FIG-1

FIG-2 - TRIGGER PARAMETER

This allows the user to select their trigger detection system preference.

OPTO is the factory default selection.

> OPTO: Opto-Electronic trigger pull sensor.
> SWITCH: Microswitch trigger pull detection.
> CANCEL: Editing is cancelled and unchanged.

FIG-2

FIG-3 - SOUND PARAMETER

Used to enable sound.

> ON: Sound enabled.
> OFF: Sound disabled.

FIG-3

FIG-4 - CLICK TONE PARAMETER

Pushbutton tones can be independently disabled.

This item is only available if the SOUND parameter is set to ON.

> ON: Tones enabled.
> OFF: Tones disabled.

FIG-4

FIG-1 - BACKLIGHT PARAMETER
Sets the time that the LCD backlight is illuminated for after a push-button is pressed.

This parameter can be set between 00:00 and 00:20 seconds. Setting this parameter to 00:00 will prevent the backlight from coming on.

FIG-1

FIG-2 - RED LEVEL PARAMETER
Sets the power level of the red backlight LED.

This parameter can be set between 0% and 100% in 1% increments.

FIG-2

FIG-3 - GRN LEVEL PARAMETER
Sets the power level of the green backlight LED.

This parameter can be set between 0% and 100% in 1% increments.

FIG-3

FIG-4 - BLU LEVEL PARAMETER
Sets the power level of the blue backlight LED.

This parameter can be set between 0% and 100% in 1% increments.

FIG-4

FIG-1 - CONTRAST PARAMETER
This sets the contrast level of the LCD screen.

This parameter can be set between 1 and 31 in increments of 1.

FIG-1

FIG-2 - DBL CLICK PARAMETER
Sets where the Select button double-click can be used.

> NONE: Double-click disabled.

> POWER UP: Double-click to power up only.

> ALL: Double-click to power up and access menus.

FIG-2

FIG-3 - AUTO OFF PARAMETER
Sets the amount of time that elapses before the marker switches itself off.

This parameter can be set between 05:00 and 60:00 minutes in 00:05 minute increments.

FIG-3

FIG-4 - RESET
This enables the user to reset all the marker parameters back to their factory state.

> NO: do not perform a reset.

> FACTORY: reset all parameters to their factory default value.

CAUTION: When FACTORY is selected this will erase all saved settings and restore the marker to how it was when it left the factory.

FIG-4

FIG-1 - TRAINING PARAMETER
This simulates the firing cycle (in unloaded state) using a BEEP to simulate a shot fired, allowing the user to practice their trigger technique off the field without firing the marker.

> ON: Training mode enabled.
> OFF: Training mode disabled.

FIG-1

FIG-2 - SHOT COUNT MENU
This menu contains items associated with the shot counter.

FIG-2

FIG-3 - GAUGE PARAMETER
This toggles the visibility of the shot counter gauge graphic on the run screen.

> ON: Gauge graphic enabled.
> OFF: Gauge graphic disabled.

FIG-3

FIG-4 - GAUGE MAX PARAMETER
Sets the number that the gauge counts down from every time the marker is fired.

This parameter can be set between 100 and 2000 in increments of 10.

FIG-4

FIG-1 - GAME TIMER MENU
The game timer menu contains items associated with the game timer.

FIG-1

FIG-2 - GAME PARAMETER
This sets the game timer start point, from which the timer counts down to zero. When the timer reaches zero the audible alarm will sound (if the alarm parameter has a value greater than zero) and GAME OVER is displayed on the LCD.

This parameter can be set between 00:00 and 60:00 minutes in 10 second increments.

FIG-2

FIG-3 - ALARM (1 AND 2) PARAMETER
An audible alarm is sounded when the game timer reaches the value set by this parameter.

The timer will continue to count down until the GAME PARAMETER has expired.

This parameter can be set between 00:00 and 60:00 minutes in 10 second increments.

FIG-3

FIG-4 - START ON PARAMETER
This sets which function starts the game timer.

> BUTTON: Select button starts the timer.
> TRIGGER: Trigger pull starts the timer.

FIG-4

MAIN MENU	TURN OFF		Turn off the GEO 4
	PRESET		
		SEMI NC	Load preset - semi auto with no rof cap
		SEMI 15	Load preset - semi auto with 15bps rof cap
		SEMI 10	Load preset - semi auto with 10bps rof cap
		NXL 2016	Load preset - NXL 2016 rulebook compliant
		PSP 2015	Load preset - PSP 2015 rulebook compliant
		PSP FAST	Load preset - PSP ramping with a 20bps rof cap
		RETRO	Load preset - NXL ramping with a 5.5bps rof cap
		USER 1	User defined preset
		USER 2	User defined preset
	🔒 **FIRE MODE**	SEMI (Default)	Select semi-automatic firing mode
		RAMP	Select ramping firing mode
	🔒 **ROF CAP**	ON	Rate of fire cap On
		OFF (Default)	Rate of fire cap Off
	🔒 **BS ON ROF ***	4.0 - 20.0 bps	Maximum rate of fire with breech sensor (BS) on (ROF CAP dependant). Default 15.0 bps
	🔒 **BS OFF ROF**	4.0 - 15 bps	Maximum rate of fire with breech sensor (BS) Off. Default 10.0 bps

🔒 The lock icon indicates items that can only be selected when the tournament lock is switched off. See page 17.

* The asterisk denotes items whose availability is dependant upon the options selected for other parameters.

	RAMP SET-UP *	Fire mode dependant		
	🔒 TYPE	STEP (Default)	STEP ramping	
		LINEAR	LINEAR ramping	
		CANCEL	CANCEL Selection	
	🔒 RATE *	0 - 100%	Percentage LINEAR RAMP rate (RAMP TYPE dependant). Default 50%	
	🔒 SEMI SHOTS	3 - 9	Number of shots before ramping can start. Default 3	
	🔒 KICK IN	3.3 - 10.0 pps	Rate which the trigger has to be pulled in pulls per second (pps) before ramping starts. Default 5 pps	
	🔒 SUSTAIN	3.3 - 10.0 pps	Rate which the trigger has to be pulled in pulls per second (pps) to maintain ramping. Default 5 pps	
	🔒 RESTART	0.0 - 10.0 s	Time in seconds (s) after last trigger pull during which ramping can be restarted. Default 0.0 s	
	BACK			
	🔒 TIMING			
	🔒 DWELL	15.0 - 35.0 ms	Solenoid energise time in milliseconds (ms) for each shot. Default 27 ms	
MAIN MENU	🔒 FSD COMP	0.0 - 5.0 ms	First shot drop-off compensation time in milliseconds (ms). Default 5.0 ms	
	🔒 FSD DELAY	00:00 - 04:00	First shot drop-off delay. Default 00:30 seconds	
	BACK			
	🔒 FILTER			
	🔒 DEBOUNCE	LEVEL 9	Use trigger de-bounce LEVEL 9 (highest level of trigger bounce filtering)	
		LEVEL 8 - 2	Use trigger de-bounce LEVEL 8 - 2 (Default setting 5)	
		LEVEL 1	Use trigger de-bounce LEVEL 1 (lowest level of trigger bounce filtering)	
		CANCEL	CANCEL DEBOUNCE Selection	
	🔒 EMPTY	1.0 - 20.0 ms	Time in milliseconds (ms) that the breech must be empty before BS looks for a paintball. Default 4.0 ms	
	🔒 FULL	1.0 - 20.0 ms	Time in milliseconds (ms) that a paintball must be in breech before the GEO 4 will fire. Default 4.0 ms	
	🔒 PULL TM	3.0 - 25.0 ms	Time in milliseconds (ms) that the trigger must be pulled for a shot to be fired. Default 6.0 ms	
	🔒 RELEASE TM	3.0 - 25.0 ms	Time in milliseconds (ms) that the trigger must be released for a pull to be registered. Default 6.0 ms	
	🔒 PULL PT *	51 - 99%	Percentage at which the trigger OPTO sensor pull point is set (TRIGGER dependant). Default 85%	
	🔒 RELEASE PT *	1 - 49%	Percentage at which the trigger OPTO sensor release point is set (TRIGGER dependant). Default 15%	
	BACK			

MAIN MENU	**HARDWARE**			
		TRIGGER	OPTO (Default)	Use OPTO to detect trigger operation
			SWITCH	Use micro-switch to detect trigger operation
		SOUND	ON (Default)	Turn on audible indicators
			OFF	Turn off audible indicators
		CLICK TONE	ON (Default)	Turn on audible tone when any button is pressed (SOUND dependant)
			OFF	Turn off audible tone when any button is pressed (SOUND dependant)
		BACKLIGHT	00:00 - 00:20 s	Time in seconds (s) that the backlight stays on for (00:00 = no backlight). Default 00:06 s
		RED LEVEL	0 -100%	Percentage power level of the red backlight LED (BACKLIGHT dependant)
		GRN LEVEL	0 -100%	Percentage power level of the green backlight LED (BACKLIGHT dependant)
		BLU LEVEL	0 -100%	Percentage power level of the blue backlight LED (BACKLIGHT dependant)
		CONTRAST	1 - 31	LCD contrast level. Default 17
		DBL CLICK	ALL (Default)	Double click is fully enabled
			POWER UP	Double click to activate power up only
			NONE	Double click is disabled
		AUTO OFF	05:00 - 60:00 m	Time in minutes (m) after which the GEO 4 will automatically switch itself Off. Default 20:00 m
		RESET	NO	Current settings retained
			FACTORY	Resets control parameters to their FACTORY state. CAUTION: Erases ALL changes
		BACK		
	TRAINING	ON		Training mode enabled
		OFF		Training mode disabled

MAIN MENU	SHOT COUNT			
		GAUGE	ON (Default)	Shot gauge on
			OFF	Shot gauge off
		GAUGE MAX	100 - 2000	Shot gauge maximum (reset value - GAUGE dependant). Default 140 shots
		BACK		
	GAME TIMER			
		GAME TIME	00:00 - 60:00	Countdown game timer start time in minutes. Default 10:10 m
		ALARM 1	00:00 - 60:00	Alarm activation time in minutes. Default 01:00
		ALARM 2	00:00 - 60:00	Alarm activation time in minutes. Default 00:00
		START ON	BUTTON (Default)	Pressing the down button starts the game timer
			TRIGGER	A trigger pull starts the game timer
		BACK		
	EXIT			

Firmware and manuals may change over time.
For the latest updates visit our knowledgebase right here:

PLANETECLIPSE.COM/KB

42 RESET
FACTORY RESET

Follow these steps in order to reset the GEO 4 to the way that it left the factory.

FIG-1
Navigate to the RESET item in the HARDWARE MENU and select the FACTORY option. See page 35.

FIG-2
Using the 1/8 hex key [A] turn the velocity adjuster screw [B] 3 turns clockwise from it's fully screwed-out position.
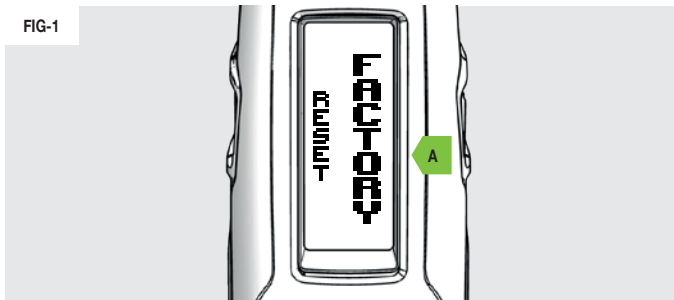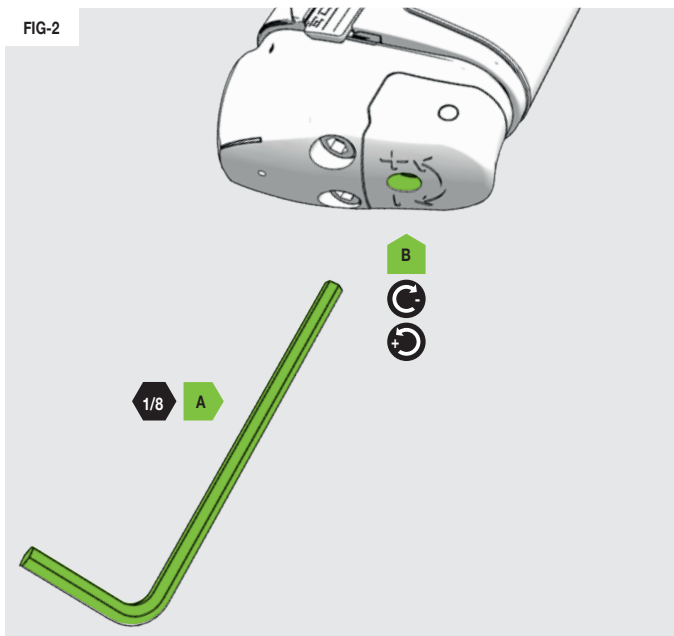
FIG-1

FIG-2

WARNING! ⚠

Do not turn the adjuster screw in too far. This will prevent the marker from firing.

43 RESET
INSTALLING THE BATTERIES

The GEO 4 uses 2 x AA (LR6, 1.5V) batteries situated in the foregrip.

Switch the marker off before you begin.

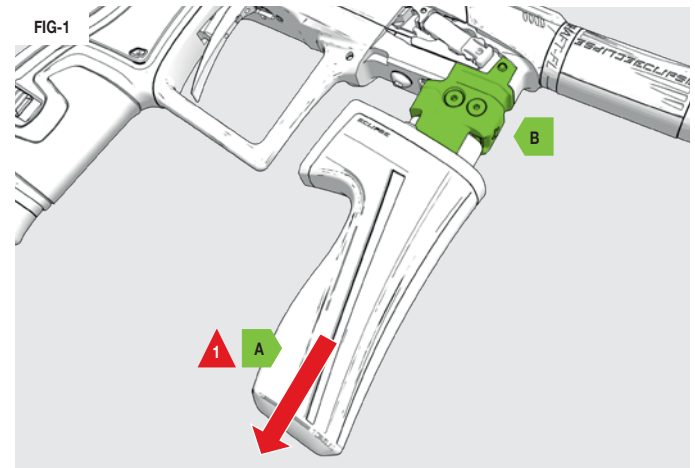**FIG-1**
Pull the foregrip A away from the body to expose the battery holder B .

FIG-2 / FIG-3
Insert two new AA batteries C and D in either side of the battery holder with the battery terminals in the correct orientation.

Replace the rubber foregrip as per **FIG-1**.
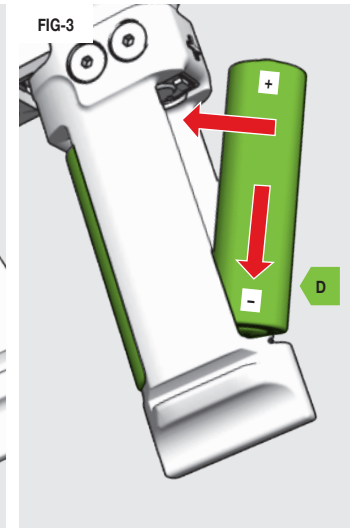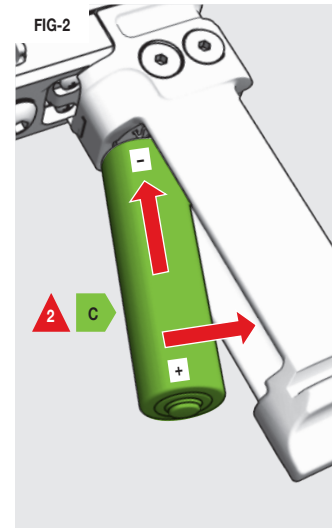
1 **ALWAYS** pull in a straight, downwards motion **NOT** at an angle or with a twist.

2 **DO NOT** use poor quality batteries.

FIG-1

FIG-2

FIG-3

GEO IV

SYMPTOM	POSSIBLE CAUSE	SOLUTION
The GEO 4 does not cycle fully.	The bolt assembly is dirty or incorrectly lubricated.	Clean, re-lubricate and replace the o-rings on the bolt as necessary.
	The DWELL parameter is set too low.	Increase the DWELL parameter.
	The Solenoid Flow Restrictor (SFR) is set too low.	Increase the flow setting on the SFR.
	A sticky or faulty solenoid spool in the solenoid body.	Check the spool, clean and replace seals as necessary.
	There is a fault with the solenoid pilot.	Replace the solenoid pilot.
	The batteries' power is low or the batteries are of a poor quality.	Replace the batteries. Use alkaline or lithium batteries. Always use high quality batteries.
	The paintballs are too tight in the barrel.	Use a better paintball to barrel bore size match.
The GEO 4 is inconsistent.	The DWELL parameter is set too low.	Increase the DWELL parameter.
	The Solenoid Flow Restrictor (SFR) is set too low.	Increase the flow setting on the SFR.
	Using poor quality paintballs.	Use better quality paintballs.
	A poor paintball to barrel bore match.	Use a better paintball to barrel bore size match.
	The inline regulator requires servicing.	Strip and clean inline regulator. Replace o-rings and regulator seal.
	Poor / inconsistent air supply into POPS.	Use a good quality preset air system.
The GEO 4 is inefficient.	Poor propshaft performance.	Clean and grease rear propshaft seal. Check condition of propshaft spring.
	A poor paintball to barrel bore match.	Use a better paintball to barrel bore size match.
GEO 4 leaks down the barrel.	Front or rear propshaft 14 x2 NBR 70 o-rings are damaged, dirty or dry.	Replace, clean and grease 14 x 2 NBR 70 o-rings on propshaft.
	Internal 017 NBR 70 o-ring and external 020 NBR 70 o-rings on the can are damaged, dry or dirty.	Replace, clean and grease 017 NBR 70 o-ring and 020 NBR 70 o-rings on the can.

| SYMPTOM	POSSIBLE CAUSE	SOLUTION
The GEO 4 has low rate of fire.	The Solenoid Flow Restrictor (SFR) is set too low.	Increase the flow setting on the SFR.
	The force setting on the loader is too low.	Adjust the loader force feed setting.
	The breech sensor (BS) is switched off.	Switch the breech sensor (BS) on.
	The breech sensor (BS) is in default mode.	Clean the breech sensor (BS) and ensure the breech sensor holes in the body are free of debris.
	The rate of fire cap (ROF CAP) is on and set to a low value.	Increase the rate of fire cap (BS ON ROF) or turn off the ROF CAP in the settings menu.
The GEO 4 leaks from the solenoid assembly.	Damaged, missing or incorrectly assembled solenoid gaskets.	Check that the three solenoid gaskets are intact and seated in their designated pockets both in and around the solenoid manifold. Replace any of the solenoid gaskets if damaged.
	GEO 4 solenoid assembly is over-pressurising.	Check the inline regulator output pressure and consequent velocity. Adjust accordingly. Strip and clean the inline regulator. Replacing the regulator seals as necessary.
	Debris on/damage to solenoid spool seals.	Clean/grease/replace solenoid spool seals.
	Damaged GEO 4 solenoid pilot valve.	Replace the GEO 4 solenoid pilot valve.
	The frame seal is damaged.	Replace the frame seal.
The GEO 4 is breaking paintballs in the barrel or the breech.	The loader has too high a force feed setting.	Adjust the loader to a lower force feed setting.
	The ball detents are damaged or missing.	Replace the ball detents.
	Poor quality paintballs.	Use better quality paintballs.
	The breech sensor is switched off.	Switch on the breech sensor.
	A poor paintball to barrel bore match.	Use a better paintball to barrel bore size match.
	Unseated rubber bolt tip.	Reseat the rubber bolt tip.
	Missing or damaged rubber bolt tip.	Replace the rubber bolt tip.
Rate of fire is low and can't be altered.	Issues with the loader/GEO 4 settings.	See our loader/GEO 4 settings video at: www.youtube.com/planeteclipsetv

SYMPTOM	POSSIBLE CAUSE	SOLUTION
The GEO 4 has low velocity on the first shot.	The FSDO parameters are set too low to overcome o-ring stiction.	Adjust FSD COMP and FSD DLY parameters.
	The bolt assembly is dirty or incorrectly lubricated.	Clean, re-lubricate and replace the o-rings on the bolt as necessary.
The GEO 4 has high velocity on the first shot.	The DWELL is too low.	Increase the DWELL slightly.
	The inline regulator output pressure is creeping.	Strip, clean and maintain inline regulator. Replace inline regulator seal if necessary.
GEO 4 has velocity drop-off during rapid fire.	The batteries are of poor quality or have insufficient charge.	Replace the batteries. Use alkaline or lithium batteries. Always use high quality batteries.
	The Solenoid Flow Restrictor (SFR) is set too low.	Increase the flow setting on the SFR.
	Air system/regulator does not flow fast enough to keep up.	Use a good quality preset air system.
	The bolt assembly is dirty or incorrectly lubricated.	Clean, re-lubricate and replace the o-rings on the bolt as necessary.
	Poorly maintained inline regulator.	Strip, lubricate and rebuild the inline regulator.
Constant low velocity.	The inline regulator is set too low.	Increase the output pressure of the inline regulator.
The breech sensor does not appear to be reading correctly.	The breech sensor is dirty.	Clean the breech sensor.
	The breech sensors are the wrong way around.	Check that the red receiver is on the right-hand side of the breech.
	There is a broken wire or contact, or a short circuit on either of the breech sensor cables.	Check the plug on the breech sensor cables. Check for cuts or pinches in the breech sensor cables.
	Either breech sensor is back to front.	Check that the breech sensors face each other when installed.
Two or more balls are being fed into the breech.	Worn, damaged or missing ball detents.	Change the rubber ball detent.
	The feed force is too high from loader.	Adjust the loader settings/use lower force loader.

SYMPTOM	POSSIBLE CAUSE	SOLUTION
The breech sensor defaults after firing.	The breech sensor is dirty.	Clean the breech sensor.
	The breech sensor is faulty.	Replace the breech sensor.
	The breech sensor is out of place.	Re-install the breech sensor then check the alignment.
On power up, the right hand side of the screen is not displayed and the marker will not fire.	The trigger is permanently depressed.	Adjust the trigger until the selected trigger detection method is de-activated when the trigger is released.
The GEO 4 does not fire.	The GEO 4 is not powered on.	Power up the GEO 4 using the button on the back of the GEO 4 grip frame.
	The POPS is not fully engaged.	Pull the POPS bonnet back until it engages.
	The battery quality or charge level is very low.	Install new high quality alkaline or lithium batteries.
	The batteries are flat.	Replace the batteries.
	The DWELL parameter is set too low.	Increase the DWELL parameter.
	The trigger is set-up incorrectly.	Adjust the trigger correctly to fully open and close the micro/opto switch.
	The solenoid is not plugged into the GEO 4 body PCB.	Plug the solenoid wire into port on the GEO 4 body PCB.
	The BS is enabled and there is no paint in the breech.	Fill the loader with paint. Check that the rubber bolt tip is seated correctly.
	The PCB is damaged.	Replace the PCB.
	The solenoid valve is damaged.	Replace the solenoid valve.
Constant high velocity/ Unable to lower velocity to desired fps.	Output pressure of the preset regulator is too high.	Use a preset regulator with an output pressure below 650 psi. Consult the preset regulator manufacturer for possible faults / maintenance requirements.

FIG-1
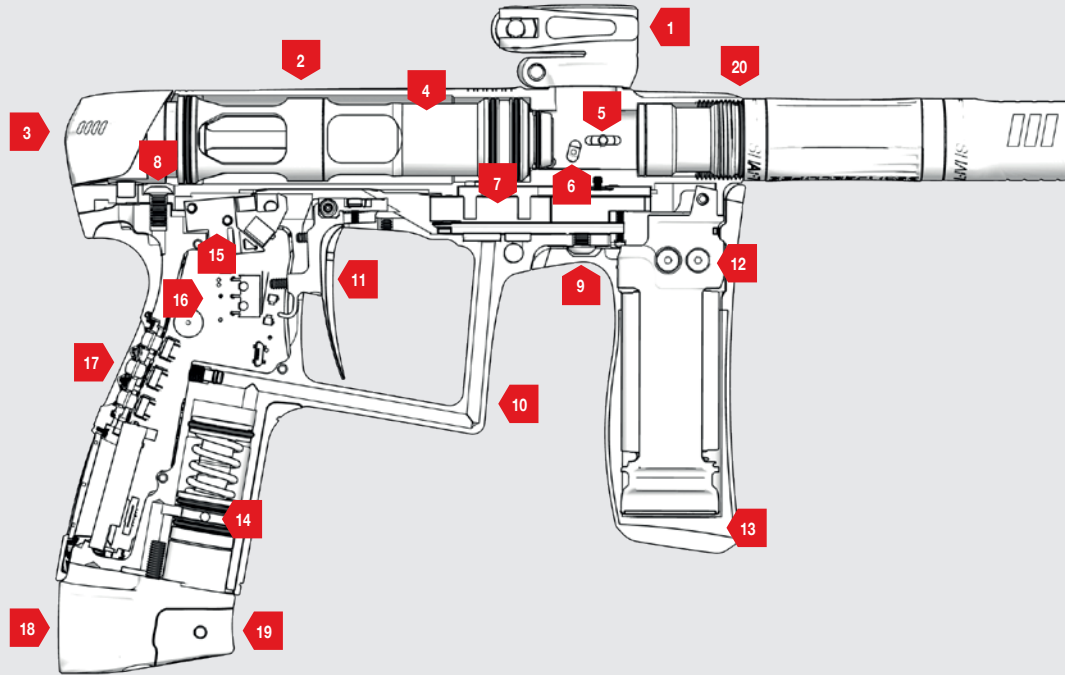
1	Low rise clamping feed tube assembly
2	Marker body
3	Quick-release bolt assembly
4	Bolt assembly
5	Rubber detent
6	Breech sensor (BS) unit
7	Solenoid assembly
8	Rear frame screw
9	Front frame screw
10	Frame assembly

11	Trigger assembly
12	Battery holder
13	Foregrip
14	SL5 inline regulator assembly
15	Secondary PCB
16	Primary PCB
17	Navigation console
18	AT2 Push On Purge System (POPS)
19	AT2 POPS bonnet
20	Barrel o-ring #016 NBR70

GEO IV

FIG-1

POPS screws
10-32 UNF x 1.25" cap head socket

POPS assembly

POPS seal

POPS filter

Purge poppet [4]

#015 NBR70

#016 NBR70

nternal
#008 NBR70

Piston o-ring
14 x 2 NBR70

Regulator piston

Regulator body

Regulator spring [3]

Adjuster top

Regulator seal

Purge poppet spring [4]

Adjuster o-ring #011 NBR70

Adjuster bottom

1   Reset the SL5 regulator to factory after re-assembly.
2   Only use the SL5 regulator with the GEO 4.
3   Only use the GEO 4 SL5 spring with the SL5 inline regulator.
4   Failure to re-install the Purge poppet assembly correctly
     could seriously damage the GEO 4.

FIG-1

Bolt bonnet

3 x 1 o-ring

Pin plunger

Propshaft spring

Propshaft bumper

Propshaft

14 x 2 NBR70

7 x 1 NBR70

Retaining ring

#021 NBR70

Valve body

Propshaft tip

14 x 2 NBR70

#015 NBR90

14 x 2 NBR70

ST2.5 bolt

#013 NBR70

#020 NBR70

#015 NBR90

ST Bolt

ST2.5 bolt tip

14 x 2 NBR70

22 x 1 NBR90

Bolt can

#017 NBR70

FIG-1

Solenoid manifold gasket

Solenoid manifold

Solenoid plug

Solenoid plate gasket

Solenoid plate

#6 Solenoid spool seal

6 x 1 o-ring

Solenoid body gasket

Solenoid body

Solenoid spool

#4 Solenoid spool seal

Solenoid pilot section

M2.5 x 8 socket cap-head retaining screws

M2 x 12 cross pan-head screw

M2.5 x 8 socket cap-head retaining screws

FIG-1

#004 NBR70

#005 NBR90

#007 NBR70

POPS pin

POPS insert

POPS body

Push rod

#004 NBR70

POPS bonnet

Latch spring

POPS button

FIG-1

A Bearing carrier screws (M2.5 x 5 cap-head socket)

B Trigger spring

C Magnet

D Bearing carrier

E Pre-travel adjuster screw (6-32 UNC x 1/8" socket set)

F Magnet adjuster screw (6-32 UNC x 1/8" socket set)

G Trigger pin

H Trigger pin locking screw (6-32 UNC x 1/8" socket set)

I Spring adjuster screw (6-32 UNC x 3/16" socket set)

J Microswitch screw (6-32 UNC x 3/8" socket set)

K Trigger shoe retaining screw

L Trigger

M Trigger shoe

N Post-travel adjuster screw (in frame)
6-32 UNC x 1/8" socket set

O GEO 4 frame

FIG-1
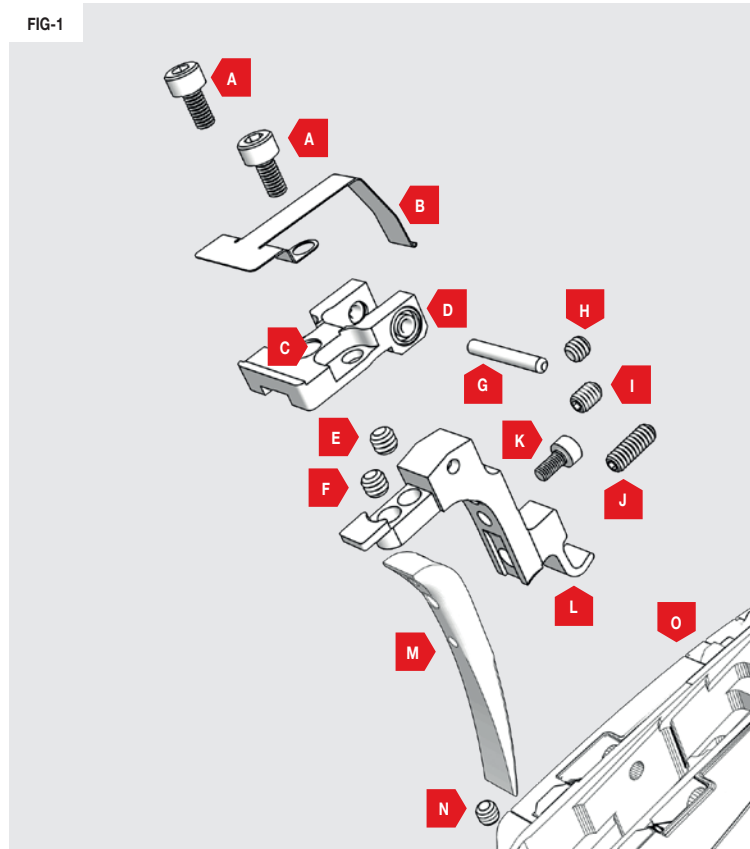
FIG-1

A Clamping feed nut o-ring
   #004 NBR70

B Clamping feed nut

C Short clamping feed screw
   10-32 UNF x 1/2"

D Feed tube

E Feed insert

F Machined clamping feed screw

G Feed swivel o-ring
   #006 NBR70

H Feed swivel

I Feed lever

FIG-1
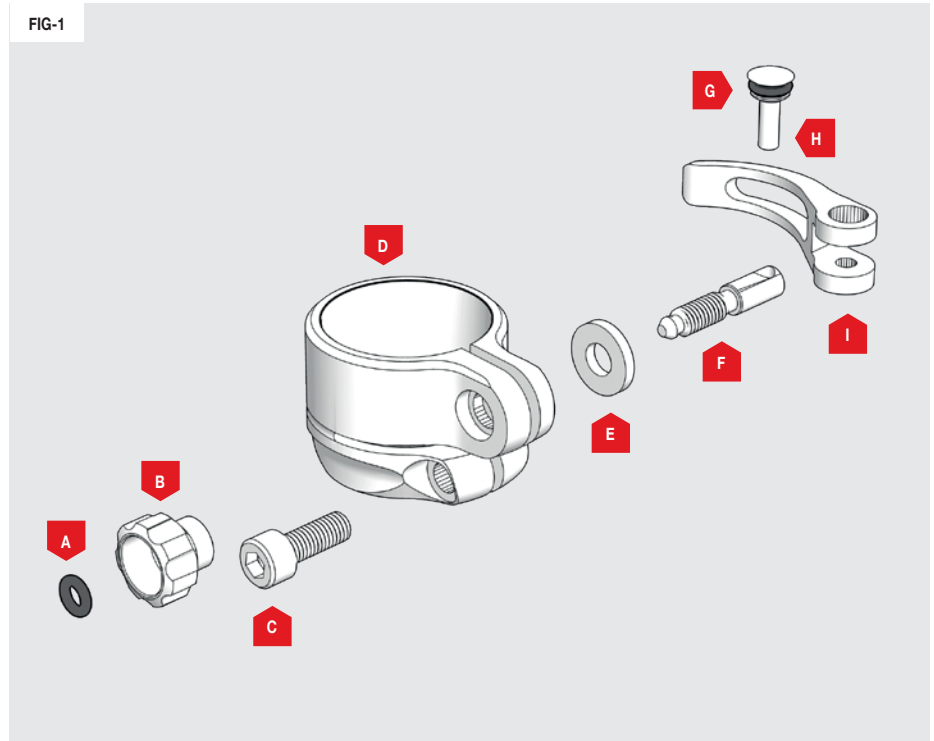
A AA battery

B Battery holder

C Battery holder screws (x4) 6-32UNC x 5/16 countersunk socket screws

D SFR assembly

E Frame assembly

F Power cable

G Wire tidy

H Solenoid output seal

I Solenoid input seal

J Battery terminal circuit board

K 4 x 1 o-ring (x2)

L Battery jumper

M Foregrip pin

FIG-1
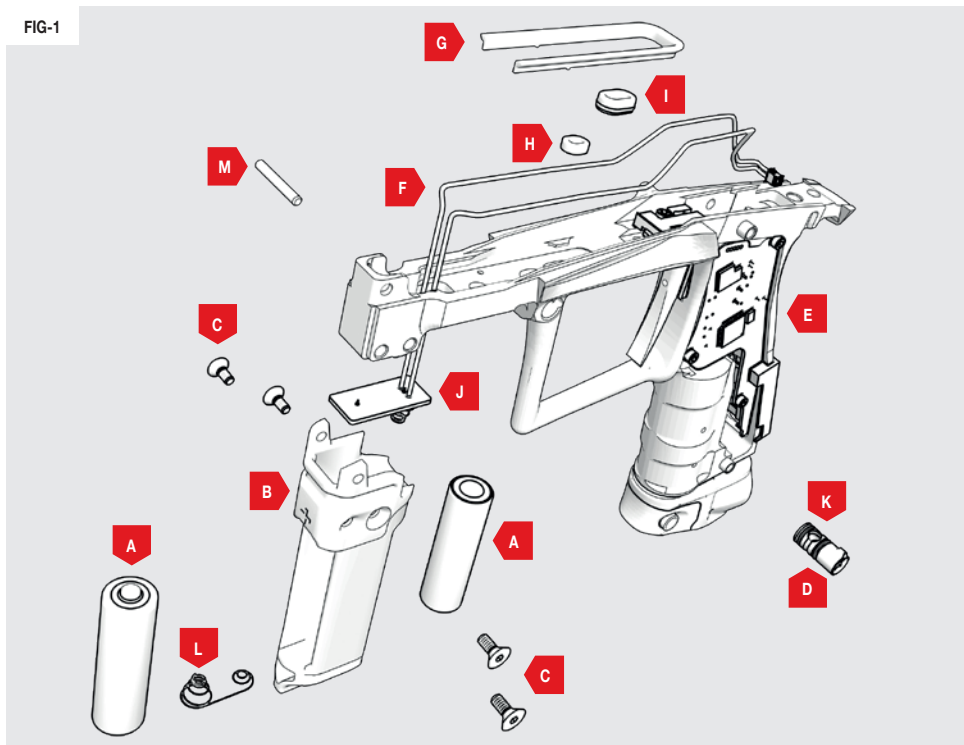
WARNING! ⚠

DO NOT use poor quality batteries.

A POPS (built into frame)
B Rear grip section
C Front grip section
D Primary circuit board
E GEO 4 Circuit board screws (x3)
  M2.5 x 5 socket cap-head
F LCD module

FIG-1
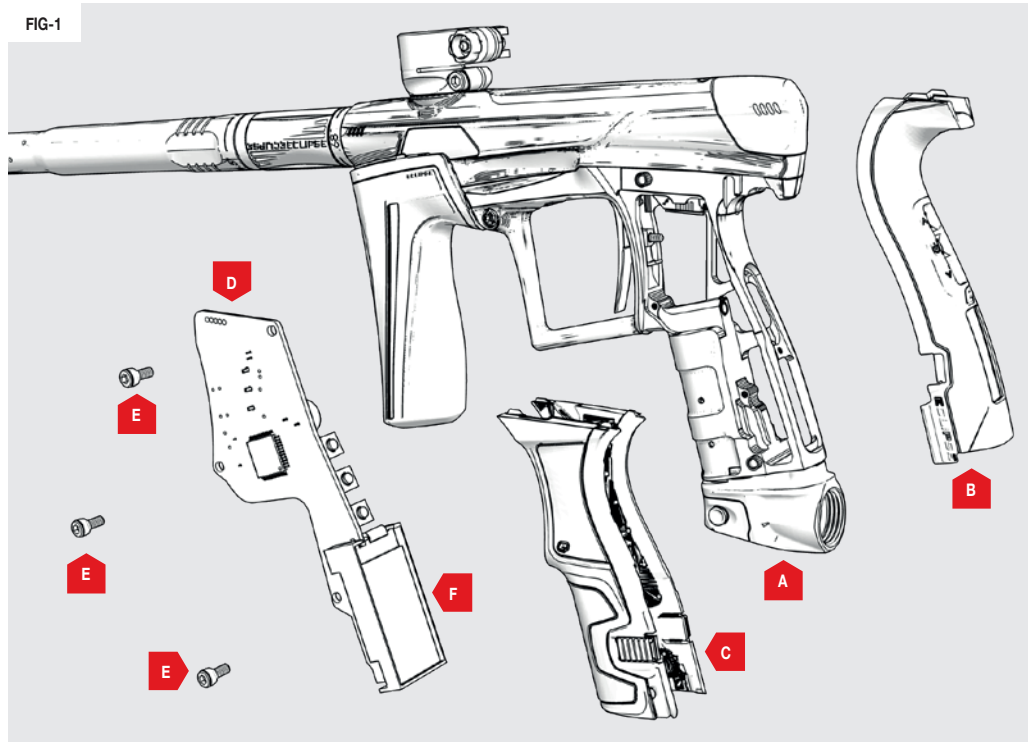
FIG-1

A Breech sensor cover
B Breech sensor
C Rubber detent
D Breech sensor cover retention clip
E Battery holder
F Spare rubber detent

FIG-1
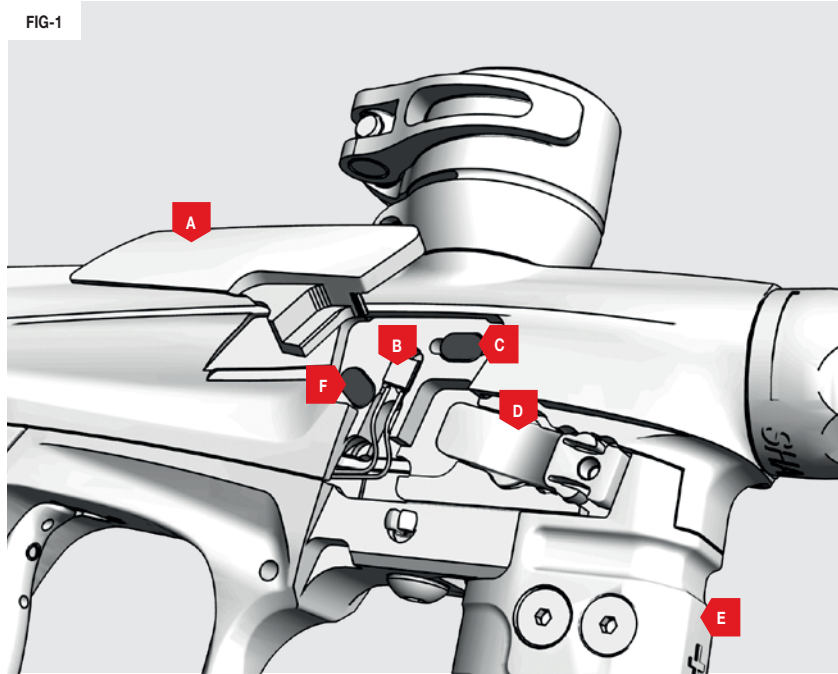
The GEO 4 has three circuit boards. Two in the grip frame and the battery terminal board in the foregrip, which powers the main circuit board.

FIG-1 GEO 4 primary circuit board

A	LCD module
B	Navigation console push buttons
C	Tournament lock button
D	Power supply socket
E	Microswitch
F	Trigger OPTO sensors
G	E-Portal Micro USB socket
H	Secondary circuit board connector

FIG-2 GEO 4 secondary circuit board

I	Solenoid socket
J	Breech sensor socket
K	Secondary circuit board connector contacts

FIG-3 GEO 4 battery terminal circuit board

L	Battery terminal circuit board
M	Primary circuit board power supply
N	Battery holder

FIG-1
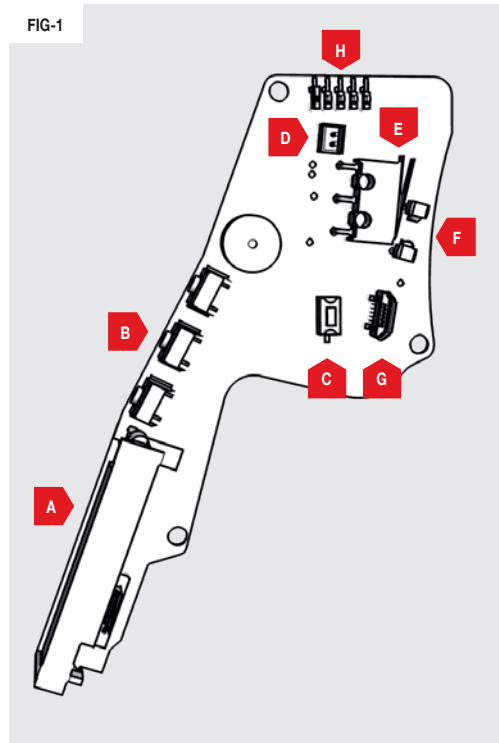
FIG-2
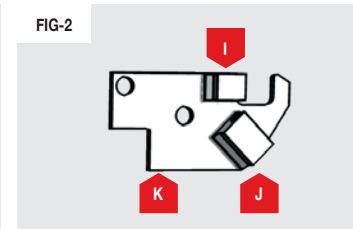
FIG-3
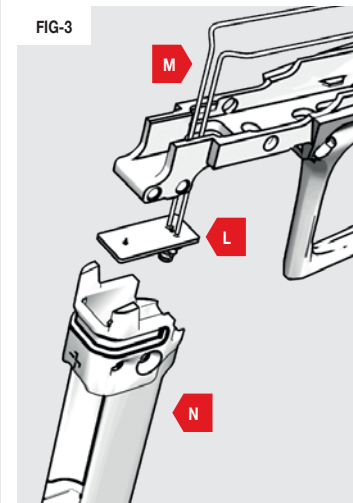
FIG-1

E-portal is a PC application that lets you connect to your GEO 4 via a USB cable. Amongst other things you can use E-portal to:

1. Upgrade the GEO 4 firmware.
2. Change the start-up splash screen.
3. Modify control parameters.

E-portal can be downloaded from the Planet Eclipse website (see opposite).

System requirements
Monitor Resolution - 1024x768 or higher
1GHz processor
1Gb RAM
Microsoft® Windows® 7 / Windows® 8 / Windows® 10 1
10Mb of storage space

A USB 2.0 Type A - Micro B 2 cable is required to connect the GEO 4 to a PC. This cable is not supplied with the GEO 4.

1 Microsoft and Windows are either registered trademarks or trademarks of Microsoft Corporation in the United States and/or other countries.

2 This is the older, 5 pin Micro B connector NOT the newer USB 3.0 Micro B connector.

Download E-Portal from our marker support page below:
PLANETECLIPSE.COM/EPORTAL

WARNING! ⚠

Ensure the marker is fully unloaded before connecting to a PC. The air system and loader should be disconnected and any paintballs should be removed from the breech of the marker.

SUPPORT
As an Eclipse customer you will have access to our worldwide technical support network that will help you with any technical problems from localised service centres to on-site* tech support.

QUALITY
All Eclipse products undergo meticulous checks by experienced specialists who care about the product that arrives at your door. Stringent quality control and precision materials equates to a quality product.

WARRANTY
Our exceptional 12 month* manufacturers warranty backed by our online warranty system offers peace of mind and ensures your claim will be repaired or replaced in a snap!

STANDARD
Your Eclipse marker is awesome and requires no aftermarket parts however, your local Eclipse Dealer will stock a range of fantastic Eclipse products and accessories that can enhance your playing style.

For more information about our Planet Eclipse Approved Tech Centres, visit our servicing page online:

PLANETECLIPSE.COM/TECH/SERVICING

* Conditions apply, see online policies for full details at planeteclipse.com

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64 NOTES

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YOUR WARRANTY REGISTRATION CARD.

Planet Eclipse offers a 12 month limited warranty period* on the Eclipse® paintball marker. The Eclipse® paintball marker is warranted to be free from all manufacturing and production defects for a period of 12 months from the time of original purchase**. Warranty cover is dependent on successful completion, and receipt by Planet Eclipse Limited, of warranty registration and proof of purchase, either in electronic form at **www.planeteclipse.com** or vial mail using the warranty card included in every Eclipse® paintball marker manual. Warranty exemptions include, but are not limited to, accidental damage, wear and tear, unreasonable force, surface finish and perishable components such as o-rings, valves, screws, solenoids and break beam sensor units (at our discretion). By completing and returning this warranty card you agree to our privacy policy***.

I verify that I am least 18 years of age and I have read the manual supplied with my Eclipse® paintball marker and I understand the safety cautions and warnings that it contains. Contact your dealer or Planet Eclipse Limited directly if you need a replacement set of instructions.

Full name:	Price (e.g. $500.00):
Address:	Colour:
	Where did you hear about your Eclipse marker?
	Magazines ☐ nternet ☐ Friends ☐
	Other (please specify):
City:	Why buy Eclipse?
Postal/Zip Code:	
State:	**WRITE SERIAL NUMBER HERE**
Country:	
Contact No:	
Email:	
Date of purchase (DD/MM/YY):	
Purchased from:	Warranty card MUST be completed in full to be valid and bear the Eclipse marker serial number.

Please complete and return this form with proof of purchase, within 14 days so that we may validate your 12 month limited warranty on your Eclipse® manufactured product.

Please return to the address on the reverse of this form.

*   For full terms and conditions that apply to the limited warranty visit **www.planeteclipse.com**

**   Limited warranty is valid for 12 months from the proof of purchase date, or 12 months from the date of manufacture if no proof of purchase is provided.

*** Full details of the Planet Eclipse privacy policy can be found at **www.planeteclipse.com**

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WARRANTY.PLANETECLIPSE.COM

67 **NOTES**

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THIS PRODUCT IS COVERED BY AND/OR LICENSED UNDER ONE OR MORE OF THE FOLLOWING PATENTS:

G.B. PATENTS:
2,342,710; 2,345,953; 2,352,022; 2,391,292; 2,391,063;

U.S. PATENTS:
7,836,873; 7,603,995; 7,073,284; 8,104,463; 7,509,953; 7,921,839; 7,089,697; 7,866,307; 8,082,912; 7,076,906; 7,607,424; 7,980,238; 8,960,175; 8,528,877; 8,201,547; 8,397,706; 8,210,160; 7,073,284; 6,311,682; 6,748,938; 6,860,259; 6,941,693; 6,973,748; 5,881,707; 5,967,133; 6,035,843; 6,474,326; 6,637,421; 6,644,295; 6,810,871; 6,901,923; 7,121,272; 7,100,593; 7,610,908; 7,603,997; 7,946,285; 6,349,711; 7,044,119; 7,185,646; 7,461,646; 7,556,032; 7,591,262; 7,617,819; 7,617,820; 7,640,925; 7,640,926; 7,866,308;

APPLICATION NUMBERS:
12/256,832; 12/613,958; 12/493,777; 11/654,721; 11/747,107; 12/503,504; 11/781,821; 60/832,548; 11/965,886; 10/280,115

Additional U.S. and International Patents may be pending.

802.076.A-000

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