

INTEGRA



PIPETBOY GENIUS Operating instructions

101950_V00



Declaration of conformity

INTEGRA Biosciences AG – 7205 Zizers, Switzerland

declares on its own responsibility that the devices

Description	Models
PIPETBOY GENIUS	1011, 1012, 1013, 1014, 1015, 1016
Accessories	1200, 1201, 1202, 1203, 1210

comply with:

International	Scope
UN 38.3	Lithium battery testing requirements

EU Directives	Scope	Date effective
2014/35/EU	Low voltage directive (LVD)	20.04.2016
2014/30/EU	Electromagnetic compatibility (EMC)	20.04.2016
2012/19/EC	Waste electrical and electronic equipment (WEEE)	14.02.2014
2011/65/EC	Restriction of hazardous substances (RoHS)	03.01.2013
2006/66/EC	Battery directive	26.09.2008

EU Regulations	Scope	Date effective
1907/2006	Registration, evaluation, authorisation and restriction of chemicals (REACH)	01.06.2007
2019/1782	External power supply efficiency	01.04.2020

EU Standards	Scope
EN 9001:2015	Quality Management
EN 61010-1:2020	Safety general laboratory equipment
EN 61326-1:2013	Electromagnetic compatibility laboratory equipment
EN 60950-1:2013	Safety information technology equipment
EN 62368-1:2021	Safety information technology equipment
EN 62133-2:2017	Batteries containing non-acid electrolytes
EN 61000-6-2:2005/ 2019	Electromagnetic compatibility (EMC)
EN 55011:2016/ A11:2020	Industrial, scientific and medical equipment - radio disturbance

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GBR Regulations	Scope	Date effective
S.I. 2016/1101	Electrical equipment safety	08.12.2016
S.I. 2016/1091	Electromagnetic compatibility (EMC)	08.12.2016
S.I. 2008/2164	Batteries and accumulators regulations	26.09.2008
S.I. 2013/3113	Waste electrical and electronic equipment (WEEE)	01.01.2019
S.I. 2012/3032	Restriction of hazardous substances (RoHS)	02.01.2013

GBR Standards	Scope
BS 61010-1:2010	Safety general laboratory equipment
BS 62368-1:2020	Safety information technology equipment
BS 63000:2018	Restriction of hazardous substances (RoHS)

USA Regulations	Scope	Date effective
47 CFR Part 15 (FCC)	Electromagnetic compatibility (EMC)	
17 CFR Parts 240 & 249b	Dodd frank “Conflict minerals”	
27 CCR Parts 25102-27001	Proposition 65: The safe drinking water and toxic enforcement act	
20 CCR Parts 1601-1608	CEC BCS, Battery charging efficiency	01.01.2017
TSCA 40 CFR Part 751	Toxic substances control act	

USA Standards	Scope
UL 61010-1:2012	Safety general laboratory equipment

CAN Standards	Scope
CSA-C22.2 No. 61010-1	Safety general laboratory equipment

CHN Regulations	Scope	Date effective
Order 32/2016	Restriction of hazardous substances (RoHS)	01.07.2016

CHN Standards	Scope
GB4943.1-2011	Information technology equipment safety
GB9254-2008	Information technology equipment radio disturbance
GB17625.1-2012	EMC limits for harmonic current emissions
GB31241-2014	Safety for Lithium-ion batteries
SJ/T 11364-2014	Restriction of hazardous substances (RoHS)

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JPN Regulations	Scope	Date effective
PSE (Denan) Law	Electrical appliance and material safety law	01.01.2014

JPN Standards	Scope	Date effective
JIS C1010-1:2019	Safety general laboratory equipment	
JIS 61000-6-2	Electromagnetic compatibility (EMC)	
J55011(H27)	Measures against radiation noise	

KOR Standards	Scope	Date effective
KS C 9610-6-1:2019	Immunity testing of environments	
KS C 9811:2019	Electromagnetic compatibility (EMC)	

AUS Standards	Scope	Date effective
AS CISPR 11 AMD 1:2020	Industrial, scientific and medical equipment - radio disturbance	
AS/NZS 61000-6-2:2006	Electromagnetic compatibility (EMC)	

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1 Introduction

1.1 Symbols used

The operating instructions specifically advise of residual risks with the following symbols:

**WARNING**

This safety symbol warns against hazards that could result in injury. It also indicates hazards for machinery, materials and the environment. It is essential that you follow the corresponding precautions.

**CAUTION**

This symbol cautions against potential material damage or the loss of data in a microprocessor controller. Follow the instructions.

**NOTE**

This symbol identifies important notes regarding the correct operation of the device and labor-saving features.

1.2 Intended use

PIPETBOY GENIUS is a pipet controller designed for aspirating and dispensing aqueous solutions with plastic or glass pipets of 1 to 100 ml volumes. It is intended for measurement, control and laboratory use. Any use of this instrument in a medical or IVD setting is under the sole responsibility of the user.

1.3 Safety notes

- 1) Do not use or charge PIPETBOY GENIUS in an atmosphere with danger of explosion. Also, do not pipet highly flammable liquids such as acetone or ether.
- 2) When handling dangerous substances, comply with the material safety data sheet (MSDS) and with all safety guidelines such as the use of protective clothing and safety goggles. Never point a pipet in anyone's direction.
- 3) Avoid pipetting of liquids whose vapours could attack the materials PP, (polypropylene, housing), POM (polyoxymethylene), PVC (polyvinyl chloride), PBT (polybutylene terephthalate), PET (polyethylene terephthalate, internal plastic parts) or silicone (tubings, seals). Corrosive vapours could also damage metallic and electronic parts inside the device.
- 4) Only use the original LiPo battery (part no. 1210) and protect it from moisture, otherwise PIPETBOY GENIUS might be damaged.
- 5) Old LiPo batteries may cause a safety risk. We recommend to replace the battery after 3 years of use. Also replace the battery if the charging intervals are unusually short or if the charging takes much longer than usual (4 hours or more). These are indicators that the battery has reached the end of its life-cycle.

If a LiPo battery is never deep discharged and is always stored and operated in the recommended temperature range and stored at 40-80% charge level during long standby periods, it may live much longer than 3 years. If it shows no signs of physical damage or change, see [5.5](#), it is a strong indication that you may continue to use the battery.

- 6) LiPo technology bears the risk of thermal runaway and cell rupture if the battery was damaged. Do not expose the battery to heat ($> 60^{\circ}\text{C}$) and avoid mechanical stress. Batteries which were subject to deep discharges may develop internal short circuits, leading to an increased self-discharge rate and heating during battery charging. This may also result in thermal runaway and cell rupture.
- 7) To extend the battery life-cycle, it is recommended to charge the battery every 2 months if the pipet controller is not used regularly. If the pipet controller is not used for more than 6 months, remove the battery from the instrument.

Regardless of the listed safety notes, additionally applicable regulations and guidelines of trade associations, health authorities, trade supervisory offices, etc. must be observed.

Please visit our website www.integra-biosciences.com on a regular basis for up to date information regarding REACH classified chemicals contained in our products.

**NOTE**

The CE and UKCA label is located inside the battery compartment.

2 Description of the device

2.1 Scope of delivery

- PIPETBOY GENIUS device
- Rechargeable LiPo battery, located inside the device
- Wall mount
- Hydrophobic sterile filter 0.45 µm, spare
- Quick Start Guide

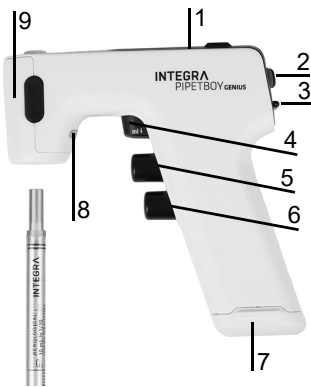
Please note: The mains adapter must be ordered separately



CAUTION

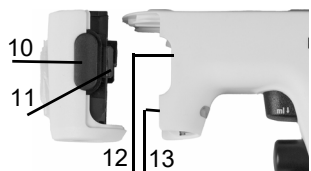
Verify the scope of delivery when unpacking the device and check for potential transportation damage. Do not operate a device that is damaged, instead contact your local INTEGRA representative.

2.2 Overview of PIPETBOY GENIUS



- 1 **Display** with battery indicator
- 2 **Volume wheel**, to set the dispense volume and to navigate in the menu
- 3 **Speed slider**, to set maximum speed
- 4 **Repeat dispense button**, to turn on the device and trigger dispenses
- 5 **Aspirate button**
- 6 **Dispense button**
- 7 **Battery compartment** and **USB-C socket** for mains adapter cable, with snap-fit
- 8 **Pipet indicator**, color shows pipet volume
- 9 **Nose piece (sterile module)**

Nose piece (sterile module)



- 10 **Snap-fit**
- 11 **Pipette mount** (silicone)
- 12 **Filter** (inserted)
- 13 **Sensor protection glass**

3 Installation

3.1 Operating environment

PIPETBOY GENIUS has been designed for use in a laboratory. It shall be operated in a dry and dust-free location with a temperature of 5–40 °C and a maximal (non-condensing) relative humidity of 80 %.

**CAUTION**

Allow the device to acclimatize before putting it into operation. Risk of condensation.

3.2 Charging the battery

Charge the battery completely before first use until the battery indicator shows a full battery on the display (1). Insert the mains adapter connector into the socket (7) on the underside of the handle. Plug the mains adapter into a wall outlet. A full charge takes 4 hours.

The battery charge status is displayed continuously from full to empty:

- Empty battery blinking: Battery is low and should to be recharged immediately. The PIPETBOY GENIUS can be used for around 2500 pipetting cycles before shutting down.
- Empty battery on the entire screen: no operation possible, the PIPETBOY GENIUS will turn off soon.

PIPETBOY GENIUS has an integrated protection: it will not overcharge even if it is connected to power for indefinite time. To avoid unnecessary power consumption, it is recommended to unplug the mains adapter when the battery indicator is full.

**NOTE**

PIPETBOY GENIUS can be used while is being charged.

3.3 Mounting of the wall mount



The wall mount serves to park PIPETBOY GENIUS. Make sure that the surface onto which the wall mount is mounted is smooth, clean and grease-free.

To mount the wall mount, remove the protective foil from the adhesive tape at the back of the holder. Make sure the closed part is facing upwards and the open lower part downwards. Wait 24 hours before using the wall mount for the first time.

4 Operation

4.1 Turn on/off the device

Turn on:

Press the repeat dispense button (4) for 3 seconds to turn on the PIPETBOY GENIUS. The last volume is displayed.

Just take the PIPETBOY GENIUS in hand or press the repeat dispense button to wake it up from the stand-by mode.

Turn off:



NOTE

After approx. 15 seconds the PIPETBOY GENIUS goes into the energy-saving stand-by mode. Depending on the charge status of the battery, it switches off automatically after 7 days at the latest if it has not been moved.

It is not recommended to turn off the device during the daily work routine. To turn off the PIPETBOY GENIUS manually, press the volume wheel (2) in the middle to access the settings menu. Move the cursor down by tapping the volume wheel to the left, highlight “Shutdown” and press the volume wheel in the middle to confirm.

4.2 Inserting the pipet



Insert the pipet into the nose piece until a slight resistance is felt. The steady grip feature enables pipettes of any volume to be snapped into a stable and save position.

When an original INTEGRA pipet is inserted, its volume is detected via the color code and the pipet indicator (8) lights up in the same color as the pipet mouth piece.



WARNING

Insert the pipettes into the PIPETBOY GENIUS with light pressure. Make sure that the pipettes do not break, which can lead to injuries, particularly with thin glass pipettes.

4.3 Pipetting

Press the aspirate button (5) to fill the pipet and the dispense button (6) to empty it.

**NOTE**

The PIPETBOY GENIUS is equipped with overflow protection when used with original INTEGRA pipets. The aspiration automatically stops just above the nominal volume and the pipet indicator starts to blink. Additional liquid can be aspirated by pressing the button again.

**NOTE**

The use of a sterile filter is recommended for sterile pipetting. To ensure that the air in the device is also sterile, you can aspirate the sterile air inside the workbench for 30 seconds without having a pipet attached before starting work.

**NOTE**

It may happen that the PIPETBOY GENIUS makes a whistle sound, if no pipet is inserted and the aspiration or dispense button is pressed. This does not impact the functionality.

4.3.1 Speed setting

Preset the maximum pipetting speed by moving the speed slider (3) to optimally match your application (down = slow, middle = standard; up = fast).

The aspiration and dispensing speed can be controlled in the following manners:

- Pressing the aspirate (5) or dispense buttons (6) all the way down to pipet with maximum speed.
- Fine speed adjustment by varying the finger pressure on the buttons (5, 6).
- For drop-by-drop dispensing press the dispense button (6) only slightly. This allows speed control until the last drop.

4.3.2 Repeat dispense

The PIPETBOY GENIUS enables to dispense the same volume multiple times from a single aspiration by pressing the repeat dispense button (4).

**NOTE**

The repeat dispense function is only possible with original INTEGRA pipets.

Set the dispense volume from 0.1 to 50 ml by turning and tapping the volume wheel (2) to the left (reduce) or right (increase) until the desired aliquot volume is displayed. Holding the wheel pressed to the side changes the volume quickly.

To fill the pipet, press the aspirate button (5). Each time the repeat dispense button (4) is pressed, the desired aliquot is dispensed with the maximum speed, see also "Pipetting speeds" on page 20. To stop a repeat dispense immediately, press the aspirate or dispense button.



NOTE

Since serological pipettes are just calibrated to their maximum volume, it may happen that the graduation lines are not exactly hit during the repeat dispenses. However, the PIPETBOY GENIUS dispenses the volume accurately and reproducibly. Scan here for more details.



4.4 Storage

PIPETBOY GENIUS can be stored stable when it placed on its back (on the speed slider). Ledges on the top and on the side of the device also allow it to be stored upside down or sideways in an elevated position.

In addition, the mounting crown provides a perfect fit in the wall mount with a click.



NOTE

PIPETBOY GENIUS can be stored in the workbench under UV light.

4.5 Settings menu

The settings menu (English only) is not required in the daily work routine. Press the volume wheel (2) in the middle to enter the settings menu with the functions listed below.

Alternatively, tap the volume wheel (2) to navigate below the 0.1 ml minimum or above the 50 ml maximum volume. The Settings menu is located between these volumes. Press the wheel to access the functions.

Function	Description
Adjust Liquid	Edit: For liquid density adjustment. (The counter on the top indicates the number of dispenses used during the actual liquid density adjustment.) Default: Resets the density adjustment to the factory value for aqueous liquids. Adj. is on/off: Press to toggle between liquid adjustment on and off.
Fillprot.	Overfill protection is non applicable “n/a” when no pipet is attached. It can be switched “on” or “off” once a INTEGRA serological pipet is inserted by tapping the volume wheel (2).
Device Info	Displays serial number, firmware version and production date.
Shutdown	Turns off the PIPETBOY GENIUS.
Exit	Returns to the main menu.

Move the cursor down by tapping the volume wheel (2) to the left, and up by tapping to the right. Press the middle to enter the sub menu and to confirm the selection.

4.6 Liquid density adjustment

The dispense volume is adjusted by default for aqueous liquids. For non-aqueous liquids, one specified repeat dispensed volume may be gravimetrically determined and adapted for the PIPETBOY GENIUS.

Materials

- Validated precision balance with 0.01 mg readability
- Lab vessel
- Non-aqueous liquid to be tested

Test conditions and environment

- Room temperature needs to be between 18–25 °C and remain constant (± 0.5 °C) throughout the test.
- Optimal relative humidity of the environment is >50%.
- The balance needs to be situated in a draft-free environment.
- The PIPETBOY GENIUS and the liquid need to be in the laboratory for at least 2 hours prior to testing to reach temperature equilibrium with the environment.

Settings

- 1) Enter the settings menu by pressing the volume wheel (2) in the middle and then on “Adjust Liquid” and “Edit” to proceed with adjustment.
- 2) Press the volume wheel in the middle and enter the targeted repeat dispense volume, e.g. 1 ml.
- 3) Enter the density of the liquid.

Dispensing

- 4) Place a lab vessel on the balance and press tare.
- 5) Insert the pipet and aspirate the liquid.
- 6) Press the repeat dispense button (4). To reduce the measurement error, multiple dispense into the vessel until the pipet is nearly empty. Weigh the liquid dispensed, e.g. 11.35 g.
- 7) The calculated weight of all dispenses is displayed. Overwrite it with the measured weight and press in the middle to confirm. This value is stored for all repeat dispenses with this PIPETBOY GENIUS.
- 8) Repeat steps 4-6 and check whether the volume displayed is identical to the measured.
- 9) Press “Save” to save your settings and “Return” and “Exit” to return to the main menu.



NOTE

An exclamation mark below the volume display indicates the liquid density adjustment. It applies to all pipettes of all sizes that are used on this PIPETBOY GENIUS.

Once a liquid density was adjusted, it is possible to inactivate it and use the default settings or re-activate it by pressing “Adj. is on/off” respectively, e.g. if two different liquids are pipetted regularly.

It is possible to overwrite the liquid density adjustment with the factory value by pressing “Default”.

4.7 Troubleshooting

Errors and Warnings are displayed as a 4-digit number. Confirm the error by pressing the volume wheel (2). The device performs a check whether the error is resolved and tries to operate. If the error persists, contact your local service technician and communicate the error number.

Problem	Error	Probable cause	Remedy
The device does not turn on	-	Battery empty or battery wrongly inserted.	<ul style="list-style-type: none"> • Connect the device to the power supply • Insert battery with correct polarity (+) and (-).
Battery is not charging or battery operation not possible.	E9101	No battery or wrongly inserted or battery connector dirty.	<ul style="list-style-type: none"> • Insert battery with correct polarity (+) and (-). • Clean the battery.
		Battery defective.	<ul style="list-style-type: none"> • Replace the battery
		Wrong mains adapter used.	<ul style="list-style-type: none"> • Use only original mains adapter (see section 7)
Extremely long charging time of battery.	W9010	Battery worn.	<ul style="list-style-type: none"> • Replace the battery.
		Wrong mains adapter used.	<ul style="list-style-type: none"> • Use only original mains adapter (see section 7)
Reduced operating time with fully charged battery.	W9010	Battery worn.	<ul style="list-style-type: none"> • Replace the battery.
INTEGRA pipet wrongly or not detected.	E9002 W9003 E9006	Nose piece polluted.	<ul style="list-style-type: none"> • Clean nose piece and sensor protection glass inside (13).
Generic pipet wrongly detected as INTEGRA pipet.	-	Pipet’s mouth piece interferes pipet detection.	<ul style="list-style-type: none"> • Use INTEGRA pipets. • Do not use this certain pipet type.
Reduced aspiration efficiency or no liquid aspiration.	E8000	The filter is wet or dirty.	<ul style="list-style-type: none"> • Replace filter.
	E8001	Pipet orifice blocked.	<ul style="list-style-type: none"> • Do not seal off the liquid flow and use clean pipets.
	E8007- E8010	The nose piece (9) is not completely mounted.	<ul style="list-style-type: none"> • Insert the nose piece, or replace defective parts.

Problem	Error	Probable cause	Remedy
Pipet drips (leak in the system).	-	Pipet is damaged or not fully inserted in the nose piece (9).	<ul style="list-style-type: none"> Reinsert a new pipet and push it all the way into the nose piece.
		The inside of the pipet mount is damaged resulting in insufficient sealing of the pipet mouth piece.	<ul style="list-style-type: none"> Replace the pipet mount (#1220) or complete nose piece.
		The filter is damaged or missing causing a leak.	<ul style="list-style-type: none"> Replace the filter (part no. see “7 Accessories” on page 23).
Dispensing not possible.	E8003	Device operated in lying position.	<ul style="list-style-type: none"> Dispense in upright position.
	E8004	Device shaken during repeat dispense.	<ul style="list-style-type: none"> Hold the device steady while dispensing.
The device no longer responds.	-	System error.	<ul style="list-style-type: none"> Turn off the device in the settings menu and turn on afterwards. Alternatively, remove the battery for 2 seconds.
Environmental conditions not met.	E8005	Humidity too low.	<ul style="list-style-type: none"> Run the device in the environment specified (see 6.1).
	E8006	Humidity too high.	
	E8013	Temperature too low.	
	E8014	Temperature too high.	
Further error messages.	any other	Hardware error, sensor failure, software error.	<ul style="list-style-type: none"> If error persists, note error number and contact service.

5 Maintenance



WARNING

Always turn off the PIPETBOY GENIUS when carrying out maintenance work, especially before disassembling.

After maintenance work, perform a leak test to ascertain correct functioning of PIPETBOY GENIUS: liquid should not leak out of a filled pipet before the dispense button is pressed.

5.1 Disassemble the nose piece



To disassemble the nose piece (9) press the black snap-fit (10) on both sides and remove the outer part of the nose piece from the side.

To reassemble, push the part of the nose piece back into the upper rails until it clicks into place.

5.2 Change the filter

Remove the nose piece to access the filter. Pull firmly on the filter to remove it.

It is recommended to change the hydrophobic filter every three months. Should the filter get wetted or soiled, it has to be changed immediately. If one side of the filter is colored, it must face towards PIPETBOY GENIUS. Clear (transparent) filters can be inserted in any direction. Press the filter deep into the tubing opening.

5.3 Cleaning and servicing

PIPETBOY GENIUS can be cleaned with a cloth moistened with soapy water or with a 70% ethanol. Ensure that the sensor protection glass (12) inside the nose piece is always clean.

5.4 Decontamination

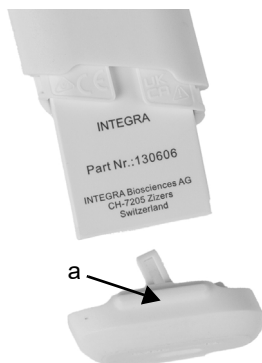
Disassemble the nose piece, see 5.1 and remove the pipet mount. The nose piece housing and the pipet mount can be autoclaved at 121 °C, 1 bar overpressure for 20 minutes. Silicone may become brittle after extensive autoclaving. Replace the pipet mount if it is damaged.

If the housing of the PIPETBOY GENIUS have been in contact with biohazardous material, it must be decontaminated in accordance to good laboratory practice. Do not spray directly on the instrument but use a lint-free cloth, lightly soaked with a disinfectant

and wipe dry directly after decontamination. Never use acetone or other solvents! Follow the instructions provided by the disinfectant manufacturer.

The device may be decontaminated with H₂O₂ gas (maximal concentration 35 %) for 60 minutes.

5.5 Replacing the battery



- 1) Press the snap-fit on both sides of the battery compartment (\bar{Z} , a) and remove the lid. Let the old battery fall out.
- 2) Insert the new rechargeable battery (part no. 1210) with the correct polarity (+/-): the INTEGRA logo is visible and the arrows point towards the device (the 5 golden contacts on the battery point towards the contacts in the device).
- 3) Close the battery compartment with the lid.
- 4) To wake up the new battery from the shipment mode, connect the PIPETBOY GENIUS to power supply.

Annual inspection: If you operate the battery beyond the recommended 3 year period, visually check the battery for signs of damage, e.g. discoloration, unexpected stains, shrinking of the tube wrapping. When the battery capacity is reduced due to age, the warning W9010 is displayed.

5.6 Equipment disposal



PIPETBOY GENIUS device must not be disposed of with unsorted municipal waste. Do not dispose of the device in a fire.



PIPETBOY GENIUS contains a LiPo battery. Do not modify the battery in any way. Dispose of the PIPETBOY GENIUS device and the battery separately in accordance with the laws and regulations in your area governing disposal of devices containing LiPo batteries.

In certain regions and countries, e.g. in EU member states, the distributor is obliged to take back this product free of charge at the end of life. Please contact your local distributor for more details.

6 Technical Data

6.1 Specifications

Volume settings	Repeat dispense volume range: 0.1-50 ml <10 ml: 0.05 ml graduation ≥10 ml: 0.1 ml graduation
Battery	Type: rechargeable, Lithium polymer, 1300 mAh Typical charging time: 3.5 hours Charging cycles: 500–1000 (when charging as indicated) Running time: at least 2500 cycles of aspiration and dispensing of 25 ml.
Electricity supply	Mains adapter input: 100–240 VAC, 50/60 Hz Device Input: 5 VDC, 1 A
Materials	Housing, nose piece: PP Cover lens with display: PA Volume wheel, speed slider, buttons: POM Pipet indicator: PC Pipet mount: Silicone
Dimensions (H x W x D)	141 x 143.5 x 35.3 mm
Weight	193 g
Ambient conditions	Operation: 5–40 °C, max. 80% RH Storage: -10–50 °C, max. 95% RH

The regulatory marks are in the housing below the cover of the battery compartment.

6.2 Intellectual property

For patent and trademark information visit:

<https://www.integra-biosciences.com/patents-trademarks>.

6.3 Pipetting speeds

The maximum pipetting speeds are reached when the button is fully pressed with the **slider** (3) in the following positions (down = slow, middle = standard, up = fast).

6.3.1 Manual control

Pipet volume	Maximum pipetting speed		
	slow	medium	fast
INTEGRA 1 ml	0.5 ml/s	1 ml/s	2 ml/s
INTEGRA 2 ml	1 ml/s	2 ml/s	4 ml/s
INTEGRA 5 ml	2 ml/s	5 ml/s	10 ml/s
INTEGRA 10 ml	2 ml/s	5 ml/s	≤12 ml/s
INTEGRA 25 ml	2 ml/s	10 ml/s	≤12 ml/s
INTEGRA 50 ml	2 ml/s	10 ml/s	≤12 ml/s
INTEGRA 100 ml	2 ml/s	10 ml/s	≤12 ml/s
Non-INTEGRA	2 ml/s	10 ml/s	≤12 ml/s

6.3.2 Repeat Dispense

Aliquot volume	Maximum aliquot speeds		
	low	medium	high
0.05 ml	0.1 ml/s	0.2 ml/s	0.2 ml/s
0.1 ml	0.1 ml/s	0.2 ml/s	0.2 ml/s
0.2 ml	0.1 ml/s	0.2 ml/s	0.4 ml/s
0.3 ml	0.1 ml/s	0.3 ml/s	0.6 ml/s
0.4 ml	0.1 ml/s	0.4 ml/s	0.8 ml/s
0.5 ml	0.2 ml/s	0.5 ml/s	1.0 ml/s
0.6 ml	0.2 ml/s	0.6 ml/s	1.2 ml/s
0.7 ml	0.2 ml/s	0.7 ml/s	1.4 ml/s
0.8 ml	0.3 ml/s	0.8 ml/s	1.6 ml/s
0.9 ml	0.3 ml/s	0.9 ml/s	1.8 ml/s
1.0 ml	0.3 ml/s	1.0 ml/s	2.0 ml/s
2.0 ml	0.7 ml/s	2.0 ml/s	4.0 ml/s
3.0 ml	1.0 ml/s	3.0 ml/s	6.0 ml/s
4.0 ml	1.0 ml/s	4.0 ml/s	7.0 ml/s
5.0 ml	1.0 ml/s	5.0 ml/s	7.0 ml/s
6.0 ml	1.0 ml/s	5.0 ml/s	7.0 ml/s
7.0 ml	1.0 ml/s	5.0 ml/s	7.0 ml/s
8.0 ml	1.0 ml/s	5.0 ml/s	7.0 ml/s
9.0 ml	1.0 ml/s	5.0 ml/s	7.0 ml/s

6.4 Chemical compatibility

The table below lists PIPETBOY GENIUS parts that come into contact with the aspirated liquid or its aerosols and vapors, and rates the compatibility of these parts to a few of the chemicals commonly used in laboratories. To determine the compatibility of a component to a chemical not listed in the table, please consult one of the several tables available on the internet. Note that the rating refers to soaking in the concentrated chemical; however, more relevant here is the attenuated effect resulting from vapors and the diluted chemical. It is recommended to test the compatibility of relevant components to a specific chemical prior to extensive use.

INTEGRA Biosciences does not warrant that the information in the table is accurate or complete and that any material is suitable for any purpose.

Chemical compatibility chart

Parts	Materials	Acetic acid	Acetone	Chloroform	Ethanol	Hydrochloric acid (20%)	Isopropyl alcohol	Sodium acetate (3M, pH 5.2)	Sodium chloride saturated	Sodium hypochlorite (JAVEL)	Sodium hydroxide (50%)
Handle, nose piece housing	PP	A	A	C	A	A	A	A	A	A	A
Cover lens	PA	C	A	C	B	C	A	A	A	A	A
Volume wheel, speed slider, buttons, pipet gripper	POM	C	A	A	A	B	A	A	A	C	A
Pipet indicator	PC	B	C	C	B	A	A	A	A	A	C
Pipet mount, tubings	Silicone	B	C	C	A	A	A	C	A	A	A
Internal parts (e. g. pump, electronics)	Elec-tronic board components	C	C	C	C	C	A	A	A	C	C
	Metal	C	A	A	A	C	A	A	B	C	C

Compatibility ratings:

A = Good: no or minor effects.

B = Fair: moderate effects, not recommended for continuous use.

C = Critical: not recommended, suitability to be determined by test.

7 Accessories

Accessories		Part No.
Mains adapter (100-240 VAC, 50/60 Hz)	US/JP version: type A plug, 2-pole	1200
	EU/KR version: type C plug, 2-pole	1201
	UK version: type G “Commonwealth” plug, 3-pole	1202
	AU/CN version: type I, 3-pole	1203
Battery	LiPo	1210
Pipet mount	silicone, for holding pipet in the nose piece	1220
Wall mount	for PIPETBOY GENIUS	1230
Sterile module (nose piece)	white whiz	1241
	lemon luminary	1242
	mint mastermind	1243
	berry brainy	1244
	blue brilliance	1245
	steel smart	1246

Filters		Part No.
Filter 0.45 µm	sterile/unsterile, for the country specific part numbers, please refer to our website	_____
Filter 0.2 µm	sterile/unsterile, for the country specific part numbers, please refer to our website	_____

Devices		Part No.
PIPETBOY GENIUS	white whiz	1011
	lemon luminary	1012
	mint mastermind	1013
	berry brainy	1014
	blue brilliance	1015
	steel smart	1016

Serological Pipets		Part No.
1 ml	Polystyrene, sterile, pack of 1000, individually wrapped	1401
2 ml	Polystyrene, sterile, pack of 1000, individually wrapped	1402
5 ml	Polystyrene, sterile, pack of 200, individually wrapped	1403
10 ml	Polystyrene, sterile, pack of 200, individually wrapped	1404
25 ml	Polystyrene, sterile, pack of 200, individually wrapped	1405
50 ml	Polystyrene, sterile, pack of 100, individually wrapped	1406
100 ml	Polystyrene, sterile, pack of 100, individually wrapped	1407
1 ml	Polystyrene, sterile, pack of 1000, 25 per bag	1501
2 ml	Polystyrene, sterile, pack of 1000, 25 per bag	1502
5 ml	Polystyrene, sterile, pack of 500, 25 per bag	1503
10 ml	Polystyrene, sterile, pack of 500, 25 per bag	1504
25 ml	Polystyrene, sterile, pack of 200, 25 per bag	1505
50 ml	Polystyrene, sterile, pack of 100, 25 per bag	1506
100 ml	Polystyrene, sterile, pack of 100, 10 per bag	1507

Imprint

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This operating instruction manual applies to serial number 2400151 or higher of PIPETBOY GENIUS.

Manufacturer and customer service

Your local INTEGRA Biosciences representative, further information, and operating instructions in other languages can be found at www.integra-biosciences.com or are available on request info@integra-biosciences.com.

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