GIMA VeinSpy Hand Held Vein Finding Device User Guide

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Introduction

VeinSpy™ is a wireless, hand-held portable vein finding device based on the principle of ‘Transverse Illumination Technology’ for the visualization of superficial & deep veins.
The device is having an array of Red & Orange LEDs (Light Emitting Diodes) in a circular ring, which enables shadow free uniform illumination of a specific region of the skin & subcutaneous tissues. The ‘Transverse Illumination Technology’ helps in clear visualization of veins in the illuminated area.

Application

- Easy visualization of veins in pediatric, geriatric & patients with difficult venous access.
- Clear visualization of veins for obese & dark skinned patient.
- Clear visualization of veins before starting of IV therapy.

Transverse Illumination Technology

In medicine Transverse illumination refers to the transmission of light through tissues of the body. The transverse illumination technology is being used for various diagnostic applications as in diagnosis of hydrocele, hydrocephalus, pneumothorax, dentistry and others.

Apart from this venous translucence (Transverse illumination of the veins) has been used in phlebotomy. Transverse illumination of the vein is the process of reflecting image visualization of veins by light. The transverse illumination technology is based on the law of physics, namely that when a beam of light continues to penetrate through the substance until it meets the empty space, the light beam is reflected. This results in the appearance of contrasting highly illuminated and dark areas.

Working Principle

The VeinSpy™ works on the Transverse Illumination Technology.
In VeinSpy™ , the light beams from a circular LED array penetrates into the skin, which are directed below & focused centrally. This acts as a fundamental light source to achieve identical illumination of subcutaneous tissues. The veins which are present in the illuminated area absorb the light and are reflected as prominent dark lines. The VeinSpy™ device consists of two sets of colored LEDs, one set emits Orange light & another set emits

Red light. The Orange light is optimal for viewing superficial veins whereas the Red light is for viewing deeper veins. The Red & Orange LEDs can be selected by the respective buttons. If required both the LEDs can be used together.

Technical Specifications

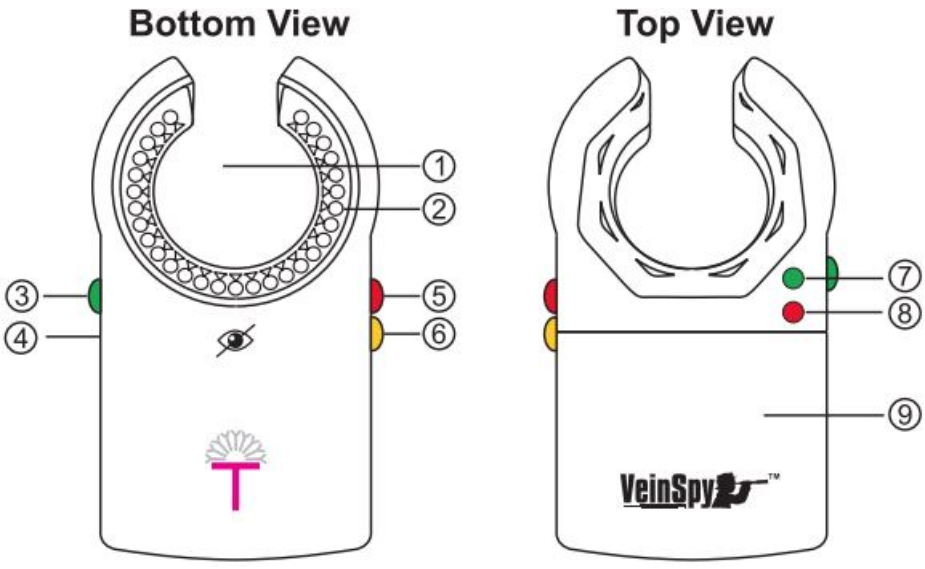
- Number of LEDs 22 Orange, 8 Red
- Power ON Indication by Green LED
- Low Power Indication by Red LED
- Functional opening 17 mm
- Viewing diameter 33 mm
- Rechargeable Battery Lithium Ion, 3.7 V, 1000 mAh
- Battery Charger 110-240 volts AC input, 5V DC output 500 mA
- Battery Backup 1 ½ hours Continuous usage
- Dimensions L 125 mm; B 65 mm; H 22.7 mm
- Weight 90 gms

Storage & Handling

Store the device in a cool & dry place:

- Storage condition 5 to 55°C
- Operating condition 10 to 45°C

Overview of VeinSpy



1. Functional open area for vein access
2. Circular array of LEDs (orange and red)
3. Power ON/OFF Button
4. Charging Pin Socket
5. Red coloured LEDs ON/OFF button
6. Orange coloured LEDs ON/OFF button

7. Power ON/OFF LED Indicator – Green light
8. Low battery LED Indicator – Red light
9. Battery cover

VeinSpy Packing Box and its Contents

S.No.	Contents	Quantity
1.	**VeinSpy™** Device	1 No.
2.	Rechargeable battery	1 No.
3.	Disposable Plastic sleeves	50 Nos.
4.	Battery charger	1 No.
5.	User Manual	1 No.

Instructions Before Use

- The VeinSpy™ device is for external use only.
- Keep the VeinSpy™ device in a safe place. Store in a cool, dry place. (Temperature 5 to 55°C)
- Disconnect the battery and keep separately in case the VeinSpy™ is not in use for prolonged time.
- Do not use the VeinSpy™ device without the plastic sleeves to avoid cross contamination between the patients.
- Avoid eye contact with the illuminated LEDs of the VeinSpy™ .

Direction for Use of the VeinSpy™ Device

- Open the VeinSpy™ packing box and remove the device & disposable sleeves.
- Ensure that the VeinSpy™ device is properly charged. After charging, the VeinSpy™ is ready for use.
- Cover the VeinSpy™ completely with the disposable sleeve (See instruction in the sleeve pouch)
- Wipe the area on the patient's skin with alcohol swab or preferably with Injecta™ (General purpose antiseptic solution).
- It is recommended to switch OFF any overhead fluorescent light as this may interfere with transverse illumination. For optimal use it is recommended to use non fluorescent side light.
- To switch ON press the green power button at the right side of the device. The green light on the device indicates thatthe device is switched ON.
- Press the Orange /Red button to turn ON the respective LEDs. The orange LEDs are for viewing superficial veins and red LEDs are for viewing deeper veins. Both the LEDs can be used together for better visualization of the veins.
- Place the functional opening of the VeinSpy™ on the skin & press gently. Before using on the patient skin ensure that the VeinSpy™ is switched on.
- To access the veins move the device on the skin with LEDs on, across & forth until a specific vein is visualized clearly. (**SeeFig.10.1**)

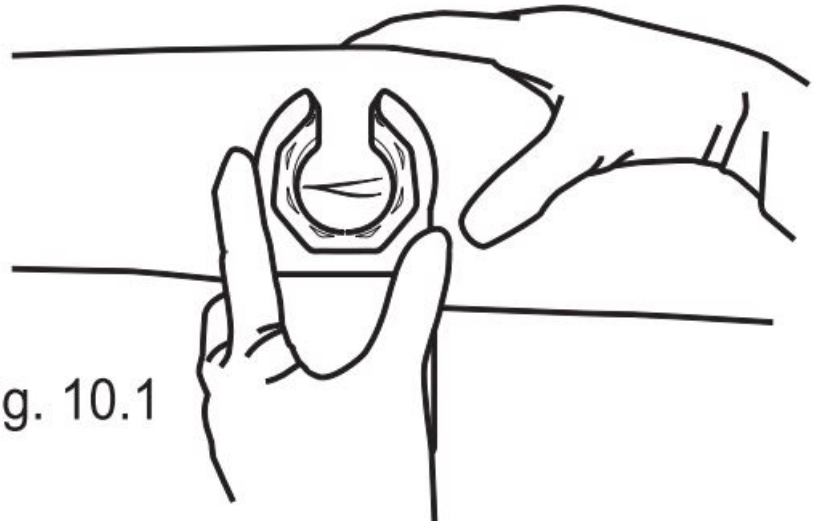


Fig. 10.1

- After visualization of a specific vein as a dark line, move the VeinSpy™ so that needle can be inserted easily through the functional open area of the device. (See Fig. 10.2)

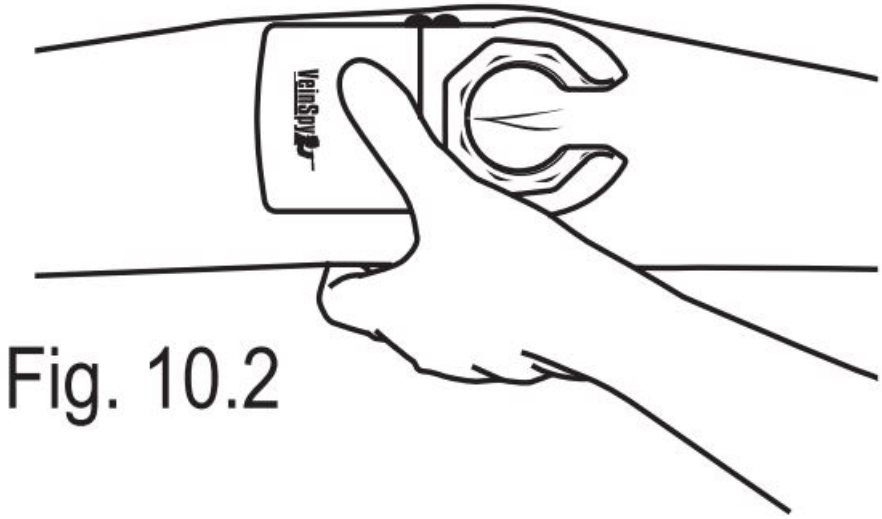


Fig. 10.2

- Press the device at the selected site of needle insertion to hold the vein and insert the needle into the vein using the normal technique of needle insertion to draw the blood or for the IV therapy. (See Fig. 10.3) Note : VeinSpy™ effectivity is enhanced when ambient light is minimum.

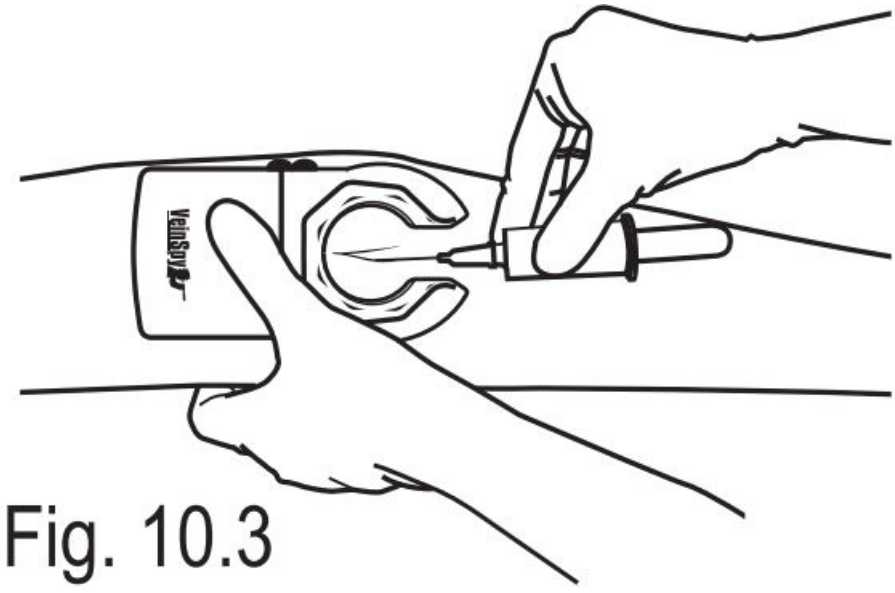


Fig. 10.3

Patient & User Safety

- Disposable sleeves prevent the VeinSpy™ from contamination of the device & cross-contamination between the patients. Ensure that VeinSpy™ is properly covered with its disposable sleeve before use (Check instructions on the sleeve pouch).
- Avoid eye contact with the illuminated LEDs* of the VeinSpy™.
- Do not overcharge the battery. Disconnect the charger after the battery is fully charged.
- It is recommended Not to use VeinSpy™ on the patient while charging.
  * Luminous intensity of LED. Orange: 2500mcd@ angle 30° Red: 2600mcd@ angle 30°

Battery Information

- The VeinSpy™ is powered by Lithium Ion battery to provide 90 mins (approx.) continuous usage depending on single/both LEDs usage at a time.
- Switch OFF the device after usage.
- Charge the Battery optimally before use.

Battery Charging instruction

- a) Low Battery Level :
  The low battery indicator on the VeinSpy™ glows brightly if battery charge drops below 30% of the full charge. In which case battery needs to be charged.
- b) Recharging of Battery:
  Plug the VeinSpy™ battery charger to the power supply. Before inserting the charging pin remove the sleeves of the device.
- Insert the charging pin to the VeinSpy™ device. (See Fig.12.1.1)

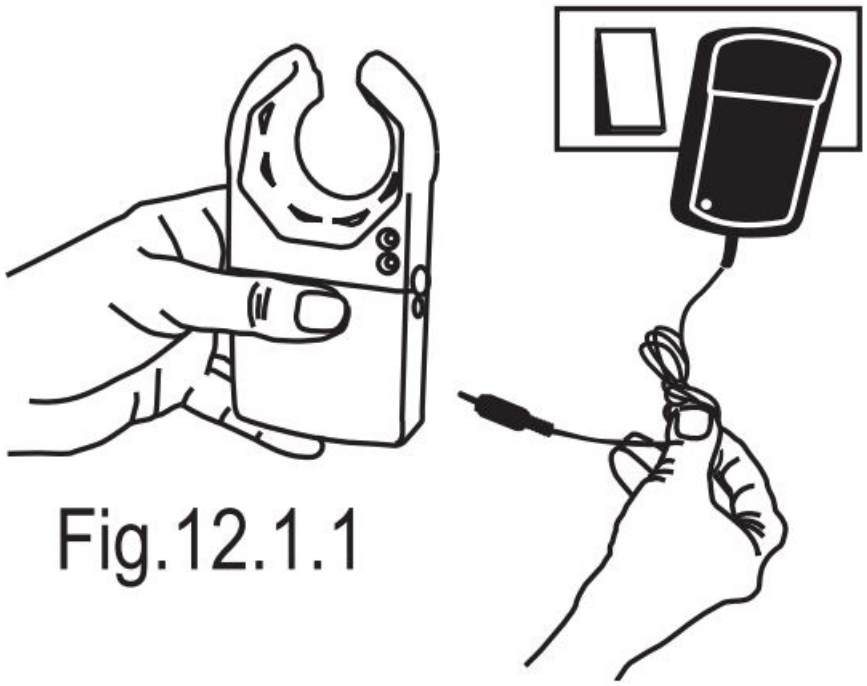


Fig.12.1.1

- Switch on the power supply to recharge the battery.
- The charging process indicated by the red light on the charger. (See Fig. 12.1.2)

Fig.12.1.2

Fig.12.1.3

- Fully charged battery is indicated by the green light on the charger.(See Fig. 12.1.3)
  *Note: Approximately 150mins. are required to fully charge the battery

Replacement of Battery

- Slide the battery cover out. (See Fig. 12.2.1)
- Gently unplug the old battery from the connector of the device & remove the battery. (See Fig. 12.2.2)
- Replace with a new battery and plug the new battery to the connector. (See Fig.12.2.3)
  Place the battery in the device.
- Slide the battery cover back properly. (See Fig. 12.2.4)

Fig.12.2.1

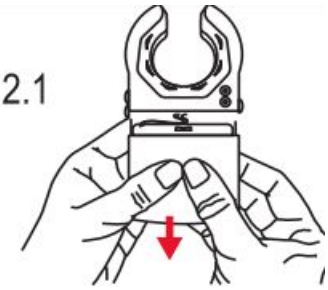


Fig.12.2.2

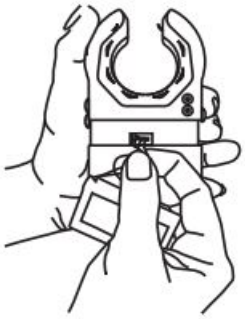


Fig.12.2.3

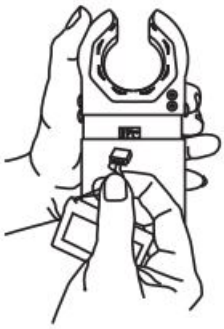
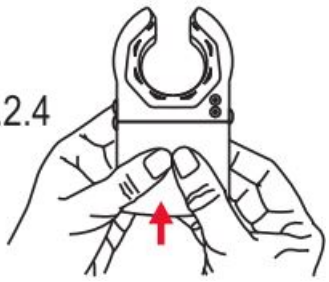


Fig.12.2.4



***Battery Specification:**
Rechargeable Battery:Lithium Ion, 3.7 V, 1000 mAh
Note: Use only the Veinspy Battery from Tulip Diagnostics.

Cleaning ofVeinSpy

The VeinSpy™ device should be cleaned regularly after use. Wipe the device a damp cloth & then clean with alcohol swab or with Injecta™ (General purpose antiseptic solution).

- Do not use any detergent/acidic/alkaline solution.
- Do not rinse/immerse in water or any liquid.
- Do not autoclave.

Troubleshooting of VeinSpy

Problems	Solutions
LED Failure	• If a single LED fails the device continues to function with a slightly decreased light intensity. In case of multiple LED failure (at least 4 LED failure) Contact Tulip Diagnostics (P) Ltd /authorized distributor of the co mpany.
No Light from LEDs	• Check the Low Battery indicator on the device; if low battery indicator is ON (Red LED), recharge battery. • Check if the battery is connected properly. • Check if the battery is charging and holds the charge for atleast 1hour. If not repla ce the battery.
Battery discharging frequ ently	• Battery too old to use, replace the battery & use again. Contact Tulip Diagnostics Pvt. Ltd /authorized distributor of the company.

Disposal of VeinSpy™ and its Battery

Do not dispose the VeinSpy™ along with the general waste in case it is no longer needed. Follow the country-specific WEEE (Waste of Electrical & Electronic Equipment) directive. Do not dispose the lithium-ion battery into fire. The battery should not be placed in the general waste bins. Dispose the lithium-ion battery in accordance with the law and regulations in your area governing disposal of such cell types."Follow Directive 2006/66/EC (Battery Directive) for safe disposal of Lithium-ion Batteries"

Symbols & Explanation

- Manufacturer
- Serial No
- Avoid eye contact with the illuminated LED's ofVeinSpy™
- Waste of Electrical & Electronic Equipment
- Authorized Representative in the European Community
- Medical Device
- European Conformity
- Catalogue No.
- Keep dry
- Fragile, handle with care
- Consult Instructions for use (User Manual)
- Temperature limit
- This side up
- Recycle
- Handle with care

Ordering Information

Sr. No.	Product Name	Qty.	Cat No.
01	**VeinSpy** ‘”	1 Device	825VS000000
02	Disposable Plastic Sleeves	50 Nos.	825DS5000050

CUSTOMER DETAILS CUM WARRANTY CARD

Customer’s Name : _____

Address : _____

_____

_____

Telephone No : _____ Mobile No: _____

E-Mail ID : _____

Serial No : _____

Dealer’s Name & Address : _____

_____

_____

Date of Purchase : _____

WARRANTY
VeinSpy™ : 1 year from the date of purchase
Battery & Charger: 6 Months from the Date of Purchase
NOTE: This warranty shall be considered valid only on the condition that this card is accompanied by Original Invoice and other documents if any.
Customer Signature with Seal (I accept the terms & conditions of the warranty)

Warranty Terms & Conditions

- Tulip Diagnostics (P). Ltd, guarantees that all its instruments are free from manufacturing defects or faults.
- Tulip undertakes repair or substitutes free of charge replacement of spare parts which may be found to have manufacturing defects.
- The warranty does not cover to defects of parts which are subject to wear&tear.
- Repair & interventions carried out during the period of the warranty do not extend or renew the period of warranty.
- Service/Repairs during the warranty period shall be carried out by company authorize personnel only.
- It is the responsibility of the purchaser to bring the product to Tulip Diagnostics Pvt. Ltd /Authorized dealer at purchaser cost & risk.
- Tulip reserves the right to recall the instrument for repair at the head office if major/frequent problem has been observed in the instrument.

Termination of Warranty

The warranty shall be terminated at the end of the warranty period & also in the following cases:

- Where attempts to make repairs or alterations have been made by unauthorized person &/or with spare parts which are not originals.
- Alteration have been made to the serial number of the product on the certificate or on the instrument.

For the use of a Registered Medical Practitioner or a Hospital or a Laboratory only.
Not for any other use.

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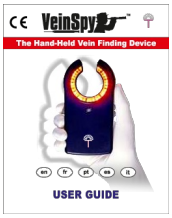
Documents / Resources

	GIMA VeinSpy Hand Held Vein Finding Device [pdf] User Guide M23450EN, VeinSpy Hand Held Vein Finding Device, VeinSpy, Hand Held Vein Finding Device, Vein Finding Device, Finding Device