VoltTab

User Manual

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Revision 1.43

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1 What's Included

- Rugged Tablet with Battery
- **VoltTab** Datalogger Module
- GPS Antenna
- Red and Black 6' Test Leads
- Hand Strap
- Tablet Charger and USB-C Cable with International Power Adapters
- **VoltTab** Charger with USB Micro Cable
- Waterproof Carrying Case

2 Electrical Specifications

Parameter	Accuracy / Impedance
DC Ranges:	
40 mV	0.1%, 10 MΩ
400 mV	0.1%, 10 MΩ
5.7 V	0.1%, 400 MΩ
57 V	0.1%, 400 MΩ
40 V	0.1%, 75 MΩ
57 V	0.1%, 75 MΩ
400 V	0.1%, 75 MΩ
570 V	0.1%, 75 MΩ
AC Ranges:	
4 V	1.0%, 75 MΩ
40 V	1.0%, 75 MΩ
400 V	1.0%, 75 MΩ

3 Introduction

This chapter covers the items that you will need to know before using the **VoltTab**, including the names of all physical parts and their functions.

3.1 Overview

Thank you for your purchase of the M.C. Miller **VoltTab** Datalogger. To get the most of the **VoltTab's** functionality, please read through this manual and make sure to store it somewhere where others who use the **VoltTab** can access and read it.

Removing and installing the tablet

If the tablet must be removed from the holder, loosen the thumb screw at the top of the tablet until the retaining tab moves freely, and rotate the retaining tab 90 degrees clockwise. Carefully remove the tablet away from the holder at the top first and lift it out.

To reinstall the tablet, locate the 1/8" hole just above the communication port gasket near the top of the tablet holder. The pin mounted to the tablet mates with this hole to maintain the position of the tablet in the holder and consequently the connection between the tablet and **VoltTab**. Tip the tablet in by the bottom first and gently press the alignment pin into the locator hole. Looking under the tablet from the left side, you can verify the alignment and see that the tablet has seated completely. The locator pin should extend through the aluminum plate on the back of the holder. When properly seated, there should be about 1/16" between the tablet and the holder when viewed from the camera cut-out.

Once the tablet is seated, rotate the retainer back 90 degrees counterclockwise over the tablet and tighten the thumb screw

Do NOT use excessive force when tightening the thumb screw.

Serial Number Location

The **VoltTab** serial number may be found in two places.

- On the underside of the **VoltTab** enclosure – if the hand strap is in place, the serial number may be partially covered.
- Underneath the tablet, the serial number appears near the bottom of the holder.

Additionally, the **VoltTab** applications will also identify the unit's serial number.
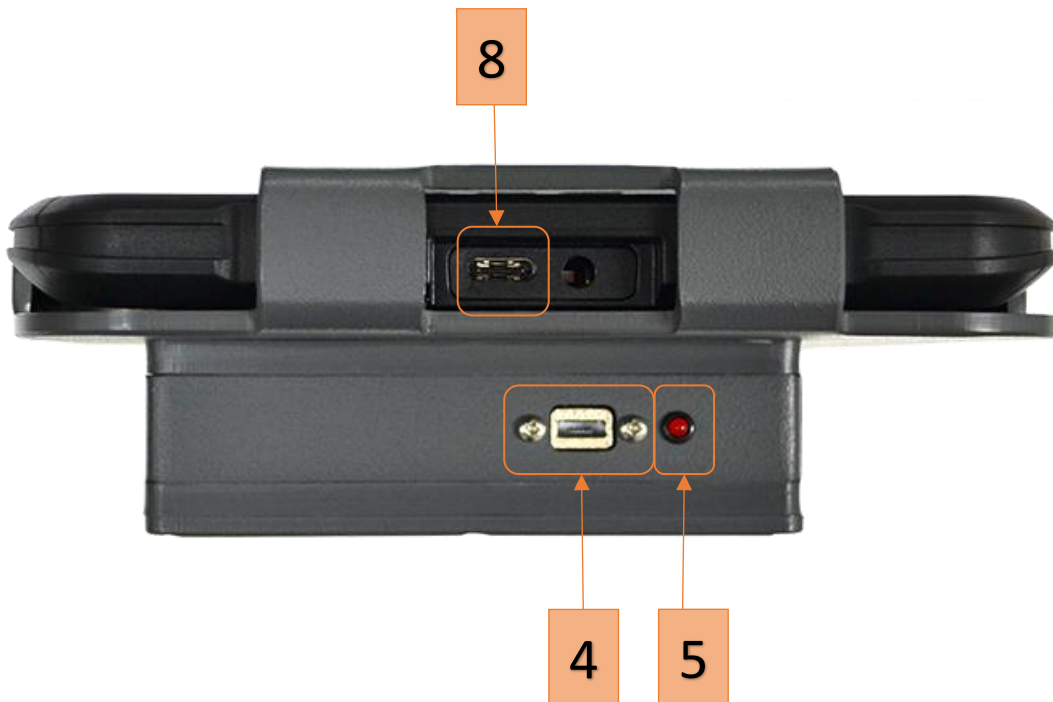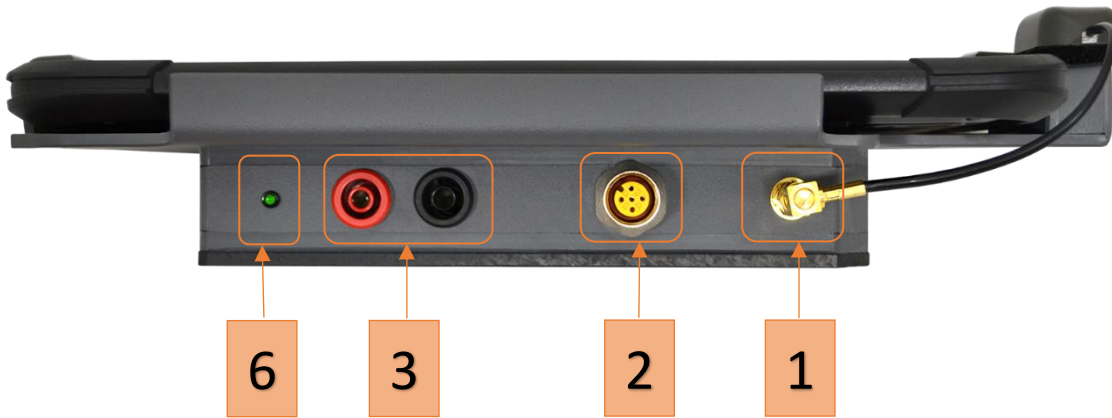
Camera location

The tablet offers both a front and rear camera.

At the top right there is a forward facing "selfie" camera and on the back side is a higher resolution camera. These can be activated by the camera icon on the main screen, or from a prompt within the Pipeline or Test Site applications.

3.2   Getting to know the VoltTab

1 GPS Antenna Connector (SMA)	**6** Power On Indicator LED (Green)
2 5-Pin Input Connector	**7** Tablet Power Button
3 Red and Black Input Banana Jacks	**8** Tablet USB-C Port
4 **VoltTab** Charge Jack (USB Micro)	**9** Tablet Volume Up/Down buttons
5 Charge Indicator LED (Red)	**10** F1, F2, F3 Function keys, used to select applications

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The **VoltTab** has a simple front panel interface for quick and easy operation. Elements of the front panel and its functionality are listed below:

1) GPS Antenna Connector – SMA connector for attaching a GPS antenna.
2) 5-Pin Input Connector for connection to MCM Data Probe Cables
3) Red and Black Input Banana Jacks - Positive and negative inputs
4) **VoltTab** Charge Jack (USB Micro)
5) **VoltTab** Charge indicator – *Red* while charging – *Off* when complete
6) Power On Indicator – *Green*
7) Tablet Charging LED – *Red* while charging – *Blue* when complete
8) Tablet Power Button
9) Tablet USB-C port for charging and PC connection
10) Tablet Volume Up/Down buttons
11) *F1*, *F2*, *F3* Function keys– Used to open applications

4 Applications

This chapter explains the procedures of accessing the various Android applications, as well as explaining the function of each parameter and how it works with the **VoltTab**.

4.1   Getting the VoltTab Applications

All licensed applications will be installed on the tablet before being shipped. When updates become available, they may be downloaded from the M.C. Miller website, or you may update from inside the applications.

If additional applications are desired, one of our sales staff will assist you with additional licensing information.

Note:

Going forward into basic operation and set-up, it is important to note, there is a potential safety issue if a data probe and banana jack leads are connected at the same time. If measuring a large AC or DC voltage with test leads attached via the banana jacks, the same voltage will be applied to the data probe, the probes banana jack, and the half cell.

Additionally, when using the banana jack inputs of the meter for precise measurements on the 40 mV range, one should not have a data probe attached to the 5 pin connector. Any voltage from the data probe input can affect the displayed potential. This can result in a different potential display if the test leads are reversed.

5 Basic Operation

5.1   Charging the VoltTab

Included with the **VoltTab** is one (1) charger and two (2) cables. One is a "Y" cable used to charge both devices at the same time. The USB-C connector is for the tablet and the USB Micro connector is for VoltTab. This cable can also be used to transfer data to and from the tablet to a PC. The second cable is only for the tablet and can be used to charge or transfer data to and from a PC.

To charge the tablet, insert the "Tablet" connector (shorter) into the USB-C port at the bottom of the tablet (Referencing #8 on Page 5).   An LED will illuminate at the top of the tablet, indicating charge status.   RED indicates charge in progress and BLUE indicates charging is complete. Note that if the tablet battery is fully discharged, it may take several minutes for the RED charger indicator to appear. Also note that the tablet cannot connect to the VoltTab while there is a cable plugged into the tablet.

Plug the "VoltTab" charge connector (longer) into the **VoltTab** USB port (Referencing #4 on Page 5). The RED charge indicator (Referencing #5 on Page 5) should illuminate and will turn off when charging is complete.

5.2   Turning on the VoltTab

Press and hold the power button at the bottom right corner of the tablet until the tablet turns on (Referencing #7 on Page 4). At this point, the **VoltTab** is still powered off and will be turned on when a **VoltTab** application is started.

5.3   Sleep Mode

To extend battery life, press the tablet power button once to turn the screen off and put it in sleep mode. This is done when the **VoltTab** is *temporarily* not being used (traveling between test sites, etc.).

5.4   Powering Off

To power the **VoltTab** off, press and hold the tablet power button until the power off screen appears and tap "Power Off" to confirm. This should be done when the **VoltTab** is not being used (overnight, etc.). When the tablet powers down, the **VoltTab** will remain active for several minutes and then power off automatically.

5.5   Removing and Installing the Tablet Battery

With the tablet placed screen down on a soft, flat surface, locate the six (6) cover latches for the battery cover (As indicated by #11 and #12 below). The four (4) upper latches (Referencing #11) slide down to unlock, and the two (2) lower latches (Referencing #12) slide up to unlock.

After all latches have been released, GENTLY pry the cover away from the tablet via the two recesses just above the bottom latches (Referencing #13). Remove the battery cover.

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With the battery cover off, locate the battery latch (#14) and slide to the left to unlock. The battery can then be removed by turning the tablet over and GENTLY tapping it against the palm of your hand.

To reinstall the battery, place it back into the battery holder – paying close attention to the correct orientation of the battery – and GENTLY snap it into place. Slide the battery latch to the right to lock (Referencing #14) and replace the battery cover, top side first. Slide the top four (4) latches up (Referencing #11 on Page 8) and slide the bottom two (2) latches down (Referencing #12 on Page 8) to seal the battery cover in place.

Note: To increase the life of the RT8 battery, it is recommended to remove it from the tablet if it is not being used on a regular basis.
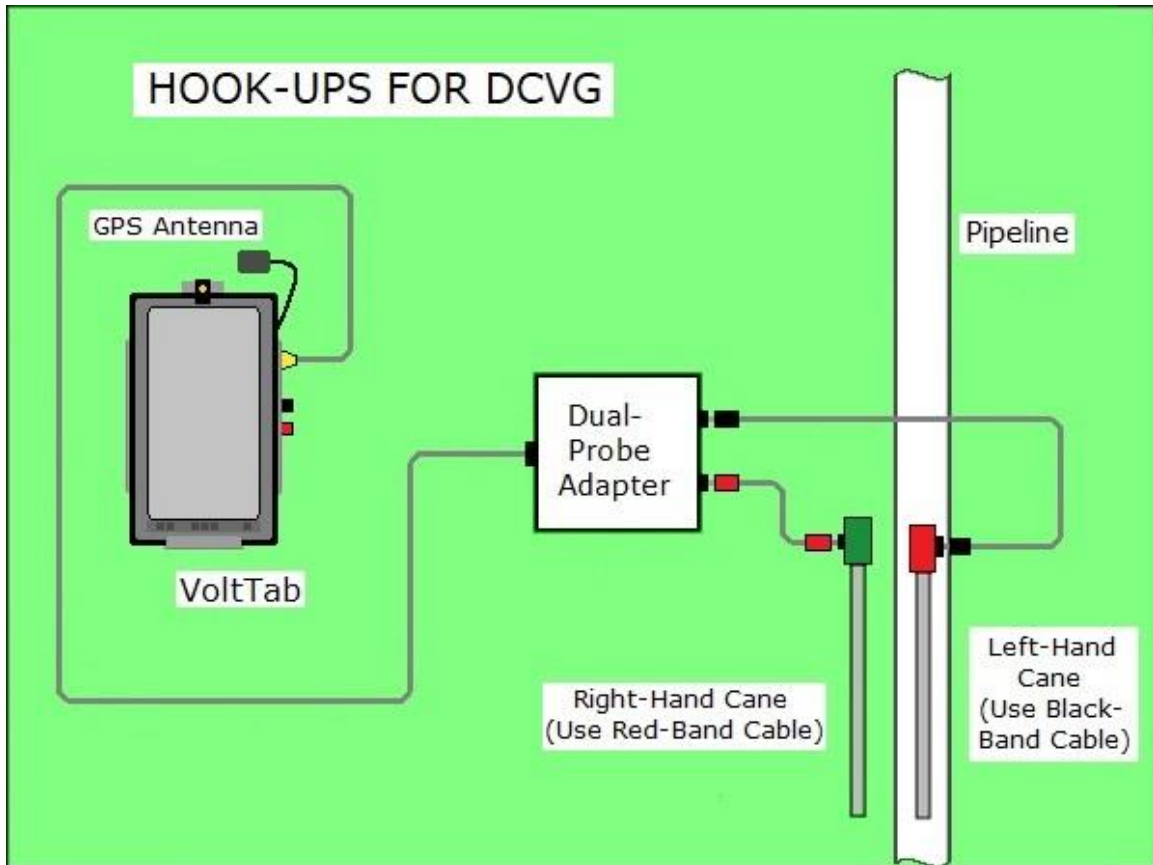
5.6 Opening applications

- Press the **F1** function key to start the **Pipeline Survey application**
- Press the **F2** function key to start the **Site Survey application**
- Press the **F3** function key to start the **VM Lite application**
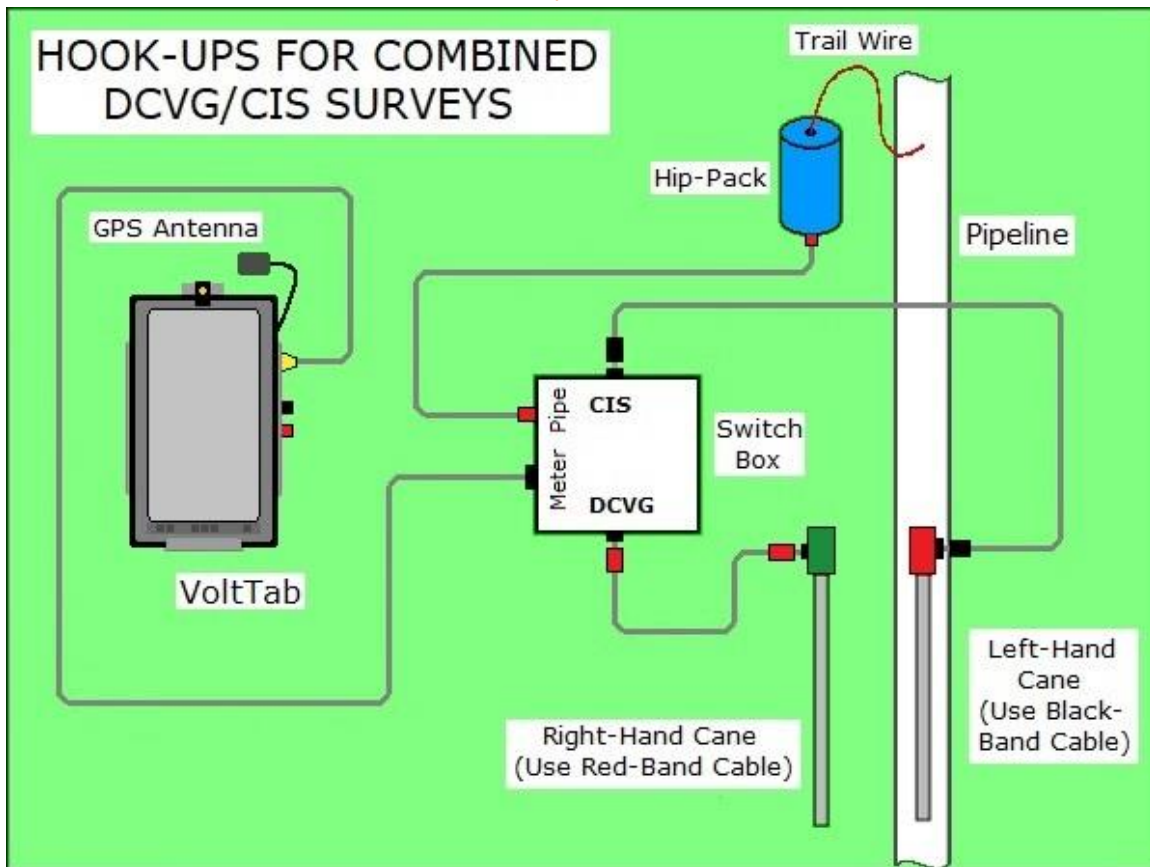
6 Connection Diagrams

6.1 CIS Survey
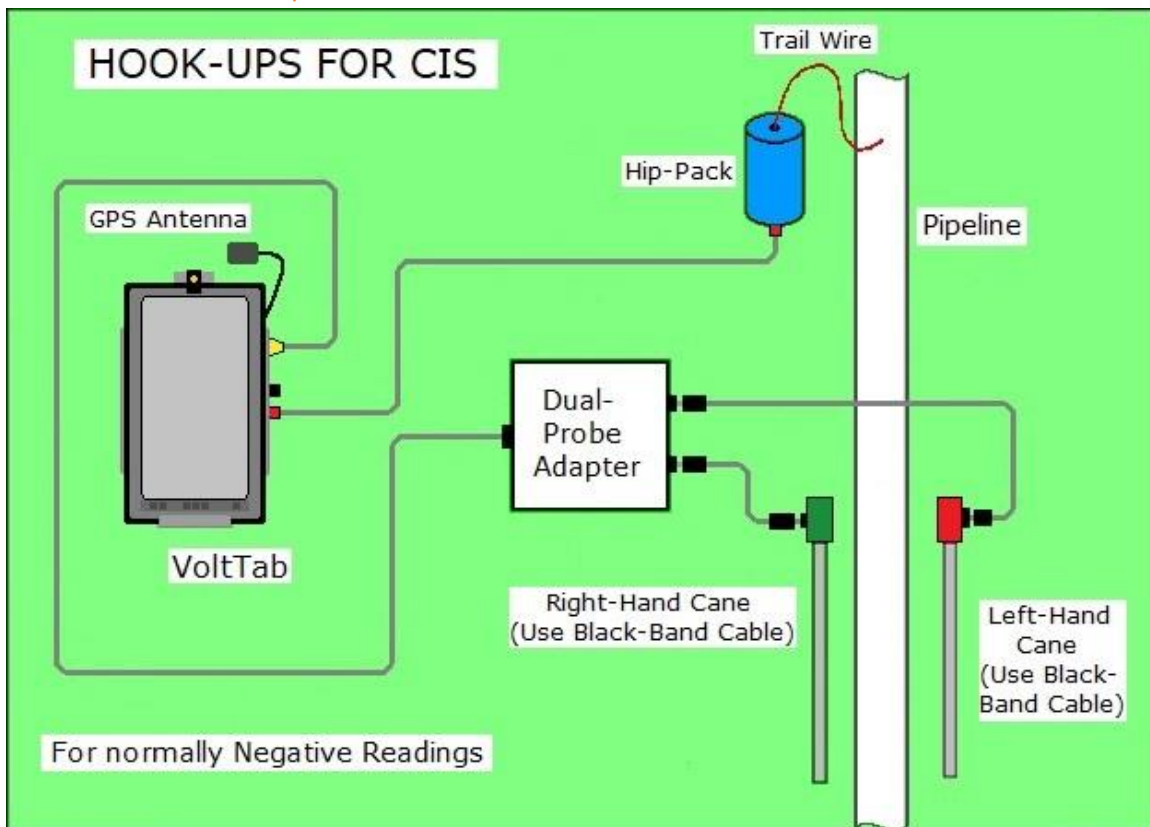
6.2 DCVG Survey

6.3   Combined CIS/DCVG Survey

7 Troubleshooting

7.1   VoltTab Hardware

Problem	Solution
- Tablet will not turn on	- Charge the tablet battery
- **VoltTab** will not turn on	- Charge **VoltTab** - Make sure the tablet is correctly seated in the holder - Open the appropriate Android application

8 Regulatory Information

Federal Communication Commission (FCC) Compliance Statement

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one of the following measures:

▪ Reorient or relocate the receiving antenna.

▪ Increase the separation between the equipment and receiver.

▪ Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.

▪ Consult the dealer or an experienced radio/TV technician for help.

This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) This device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

Industry Canada (IC) Compliance Statement

This device complies with Industry Canada license exempt RSS standard(s). Operation is subject to the following two conditions: (1) this device may not cause interference, and (2) this device must accept any interference, including interference that may cause undesired operation of the device.

Le présent appareil est conforme aux CNR d'Industrie Canada applicables aux appareils radio exempts de licence. L'exploitation est autorisée aux deux conditions suivantes: (1) l'appareil ne doit pas produire de brouillage, et (2) l'utilisateur de l'appareil doit accepter tout brouillage radioélectrique subi, même si le brouillage est susceptible d'en compromettre le fonctionnement.

NOTES: