Release Notes

Trimble® Earthworks Training Simulator Release Notes

Version 1.11.x
Revision A
November 2019

Trimble

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1

Introduction

In this chapter:

- User documentation

1.1 User documentation

This release of the Trimble® Earthworks training simulator includes the following documentation:

- Release Notes (this document)
- User Guide

For detailed information on using the new features of the Trimble Earthworks app provided by the training simulator, refer to the help in the Trimble Earthworks app or the operator's documentation on the Partners web site.

2

New features and improvements

In this chapter:

- Trimble Earthworks ECM software
- Single UTS guidance for excavators
- Laser guidance on dozers
- Launch Assistant
- .apk file location
- LPM demo
- Minor improvements

2.1 Trimble Earthworks ECM software

The version 1.11.x release of the Trimble Earthworks simulator incorporates the Trimble Earthworks V1.11.x system ECM software.

2.2 Single UTS guidance for excavators

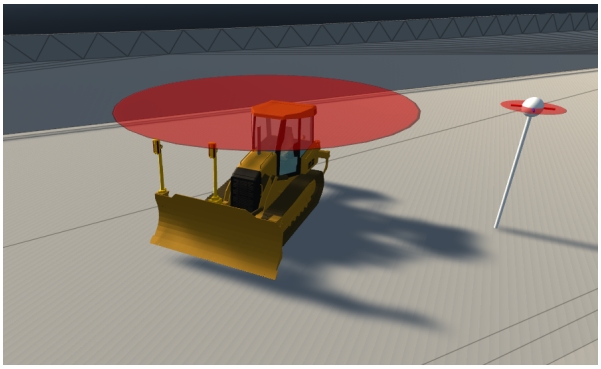
In v1.10, the simulator introduced UTS guidance for dozers and graders. In v1.11.x, you can also use UTS guidance for excavators.

For instructions on using UTS, refer to the *Simulator User Guide*.

2.3 Laser guidance on dozers

V1.11.x of the simulator supports laser guidance on dozers.

Although the laser plane spans the entire design, it only displays as a red disc in proximity to the machine. The plane is not impeded by elements of the design.



For more information, refer to the *Simulator User Guide*.

2.4 .apk file location

Android packages, such as the the operator app, are contained in .apk files.

Historically, the .apk files were stored in /<simulator>*//bin/earthworks/_Duplo/www/client/Android/*.

In v1.11.x, the following .apk files are duplicated in /simulator>*/Android/* for ease of access:

- launcher.apk – the standard operator app .apk file
- lpm.apk – the LOADRITE® Payload Management .apk file, see 2.5 LPM demo
- launch-assistant.apk – see 2.6 Launch Assistant

2.5 LPM demo

The simulator v1.11.x includes a demo of Trimble LOADRITE Payload Management (LPM) functionality. LPM products include machine sensors that enable you to measure the weight of material moved.

The ground material on this design is interactive. The demo includes trucks to hold the material. When the truck's bed is full, it drives from the design and an empty truck arrives.

To view how the operator app displays LPM data, load /<simulator>/*Android/lpm.apk* on the tablet or in BlueStacks.

Note – *You cannot right-click to reposition the machine in the LPM demo.*

2.6 Launch Assistant

The Launch Assistant (*/Android/launch-assistant.apk*) is an optional troubleshooting tool. It uses an alternative method to establish a connection between the PC and a TD5x0 or BYOD display on systems that cannot resolve the myec520.com domain name into an IP address.

For users who do not have connection issues, Launch Assistant is not required.

For more information, refer to the Troubleshooting section of the *Simulator User Guide*.

2.7 Minor improvements

- The guidance on using the simulator with the BlueStacks Android emulator is updated in the *Simulator User Guide*. ***Ensure that you edit the hosts file on your PC.***
- The OEM machine colors are improved.
- Joystick control of blade rotation on dozers is improved.
- UTS devices now reflect realistic battery depletion down to 10%.
- Increment/decrement controls on joysticks are now more consistent between machines.
- The *Simulator User Guide* includes a chapter with quick start instructions.

3

Known issues

In this chapter:

- Introduction
- Simulator installation issues
- Simulator operating issues

3.1 Introduction

Known issues include:

- Unresolved errors in the software
- Unexpected behavior of the system as a whole, or of a device

Future product releases may resolve these issues.

3.2 Simulator installation issues

The simulator software components require available network ports to communicate. For more information on the port requirements, see Appendix , Simulator system architecture.

3.2.1 Install the simulator on an appropriate drive

It is recommended that you install the simulator on your system drive.

3.2.2 Avoid clashes with earlier versions

If the simulator is not working correctly and you installed it over a previous version, delete all the files and perform a clean install.

3.2.3 Correct PC to display data cable required

Ensure that you use a standard Ethernet cable (Cat 5 or above) to connect the PC to the TD520 display, and that the cable is connected correctly. A non-standard data cable, such as a crossover cable, may cause the simulator to display unexpected issues like lost guidance or a missing Start button.

3.2.4 Simulator on Citrix environments

Avoid installing the simulator on a Citrix environment. The Unity engine will not work.

3.2.5 Correct PC to display data cable required

Ensure that you use a standard Ethernet cable (Cat 5 or above) to connect the PC to the TD520 display, and that the cable is connected correctly. A non-standard data cable, such as a crossover cable, may cause the simulator to display unexpected issues like lost guidance or a missing Start button.

3.2.6 Required network port is occupied by another process

The simulator software components require several network ports to communicate. The simulator can fail to work if these ports are occupied by other services. Common services that block ports include:

- World Wide Web Publishing Service (W3SVC)
- SQL Server Reporting Services (MSQLSERVER)
- Other web servers such as Apache/Tomcat or IIS
- Internet Connection Sharing (ICS)
- Other DNS servers

For example, the YAMS Proxy component requires port 80. If YAMS Proxy is blocked from running by the firewall or because a process occupies the port, the following error message appears: ERROR: yams-proxy: Inactive.

To determine which ports are occupied by processes, use one of the following methods:

- Enter *netstat -ab* at the command line as an administrator. If you do not have administrator permission, contact your IT department.

  Find the service running on TCP 0.0.0.0:80.
- Check if a web server is running:
  a. Open a browser window.
  b. Enter *localhost* in the search bar and press Enter. If a webpage displays, a web server is running.

     Note – If a webpage does not display, it is still possible that a web server is running.

To resolve the port clash, use one of the following methods to disable or uninstall the blocking process:

- If the netstat software reports that the system is occupying port 80, IIS may be running. This is most likely if you are running Windows 7, or have a PC updated from Windows 7. Enter *net stop http* in a command window as administrator. You must repeat this method after each reboot.
- Disable W3SVC:
  a. From the Start menu, enter *services* and open the application (you may need the required permissions to run this program).
  b. Find World Wide Web Publishing Service in the list.
  c. Right-click Properties and then click the Stop button.

     To make this a more permanent solution, change the service's startup type to Manual or Disabled.

- Remove IIS or SQL Server reporting services (if they are unneeded):
    a. From the Start menu, enter *Turn Windows features on or off*.
    b. Disable Internet Information Services.
    c. Restart the PC.

3.2.7 Firewall blocks the applications from communicating

The YAMS Proxy error message can also appear if YAMS Proxy is blocked from running by the firewall.

Check that the applications can communicate through the firewall. For help, contact your IT department.

3.2.8 Virus scanner flags the software as unsafe

If your virus scanner flags the software as unsafe, set the virus scanner to allow the applications to run. For help, contact your IT department.

3.2.9 Cannot create a network with a static IP address

If you do not have permission to create a network with a static IP address during the installation process, contact your IT department.

3.3 Simulator operating issues

3.3.1 Launch Assistant

If your system cannot create a connection between the PC and the display, use the Launch Assistant. The Launch Assistant helps the system to resolve IP addresses. To use the Launch Assistant:

1. Start the simulator as usual.
2. Load the file /<simulator>*/Android/launch-assistant.apk*.

Note – The Launch Assistant does not correct BlueStacks issues.

3.3.2 Screen resolution

If using an Android emulator, ensure you have the screen resolution set to an aspect ratio of 16:10, for example 1920 x 1200.

3.3.3 Accessing Web Interface screens from within the Operator App

There are several buttons in the Operator App that enable you to access sections of the Web Interface (for example, editing an attachment or advanced configuration of GNSS). The simulator enables you to access these Web Interface screens, but when you click Exit, the app closes.

3.3.4 Standard excavator machine type may perform poorly on PCs with lower processing capability

The excavator with Standard (GS5xx) configuration is equipped with GS520 sensors and has been developed to demonstrate Autos functionality in an excavator. This simulator model places greater demands on the PC's CPU and graphics card to create a realistic Autos experience.

When the simulator is running on a PC that does not meet the recommended processing capability, you may experience:

- Guidance Lost message on the Android device
- Required Devices Are Not Configured message on the Android device
- A difference in machine position between the machine model in the simulator guidance window and the machine model on the Android device
- The machine bucket is driven beyond the design surface

If the simulator is running on a PC that falls into this category, a warning message displays at the top of the main screen.

You may be able to resolve this issue by pressing F12 to change to non-3D graphics mode.

3.3.5 Possible DNS connection issues between PC and display

Earlier releases of the simulator used the IP address 192.168.168.1 to connect the PC to the TD520.

The simulator now uses the virtual URL myec520.com to locate the EC520 on the network. The simulator now includes a DNS server to resolve that URL to the PC at 192.168.168.1. This requires port 53 to be available.

If there is a connection error, for example because another service is occupying the port, the simulator will appear to start correctly but show a DNS Inactive error. Services that may occupy the port include:

- ICS (Internet Connection Sharing): usually installed if the PC has been used as a hotspot
- A previously installed DNS server

Free port 53 to enable the simulator to communicate.

3.3.6 Simulator may exhibit instability if run for an extended period

The simulator may display unexpected behavior after running for an extended period of time. To avoid instability, close and restart the simulator application at least once every 24 hours.

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