YOUR CONSTRUCTION TECHNOLOGY PROVIDER



# Field Reference Guides EARTHWORKS GRADER VERISON 2.00

SITECH SOUTHEAST TEXAS



#### System: Earthworks Grader

**Training Guides** 

#### Version: 2.0

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#### Starting Earthworks





2. Select operator

3. Enter password if required and touch login



4. Raise and lower the blade to initialize sensors







#### Dashboard



**Machine Setup System Status Job Setup** Licenses System Status Job Setup Machine Setup Licenses **Dual GNSS** Motorway 10 🗹 0 🗥 0 🕲 8 🗹 0 🛆 0 🔕 Motorway.V01 Site Radio Position Source Status of Devices Select or Create Project EC520 License • Select or Create Design **Component Warnings Correction Source** TD520 License • Create Work Orders

- **GNSS Receiver License** •





#### Select Project, Design and Work Order





#### 1. Touch Job Setup

- 2. Select Project
- 4. Work Order (Create New)





#### 5. Add Work Order



- 8. Select Design
- 9. Touch Apply



6. Type New work Order Name

#### 7. Touch Save







#### Select Project, Design and Work Order: VCL



#### Trimble® Earthworks Q ♣ ♣ I JOB SETUP Ð Positioning Source Dual GNSS SiteVCI Guidance Combination 3D + 3D Project 2 Mode Design 3 Work Order Bad Fill points 4 Design SiteVCL Surface FullSite $\sim$ 🗸 Apply × Cancel 🐃 Project

- 2. Touch Project- Select Project
- 3. Touch Mode- Select Design
  - 4. Touch Work Order



#### 5. Add Work Order

1.Touch Job Setup



- 8. Touch Design- Select Design that contains a VCL
- 9. Touch Surface- Select Surface



- 6. Type New work Order Name
- 7. Touch Save



- 10. Touch Master Alignment Select Alignment
- 11. Touch Apply
- 12. Touch Start





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Start

#### **Create New Project**



Positioning Source	Dual GNSS	Project	Motorway	~
Suidance Combinatio	on 30 + 30	rioject	wiotorway	·
$\sim$		Mode	Design	~
		Work Order	Work Order	~ ►
		Design	None Selected	~

1. Touch Job Setup

2. Touch Project







4. Enter Project N 5. Touch Save



- 7. Touch Apply
- 8. Touch Start





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Start

#### **Earthworks Screen Action Bar System Settings Guidance Bar** Trimble® Earthworks . 2 Motorway.V01 0.00 FT ++ 0.00 FT 井 \$ 0 Shortcut Bar -9 Light Bars 6-100 Ш MANUAL 🖆 MANUAL MANUAL -Work Settings Text Ribbon М 1.30 1.35 Į. 2679857.50 (N) Cut Left [FT] Cut Right [FT] Offline (FT)





#### Work Screen Interface

Trimble® Earthworks

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3. Drag to pan

Trimble® Earthworks

MANUAL

1.30

6. Touch to re-center

Trimble.

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Motorway.V01

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4. Pinch-Spread to zoom/Zoom out



2. 2 Finger swipe to change views



5. Touch to select Pan or Rotate



- 7. Touch and Hold for Setup
- 8. Swipe to change view





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#### Work Screen Setup



- 1. Touch and Hold
- 2. Touch Layout



7. 2 Finger Swipe to single view





4. Touch Profile View 5. Touch Plan View



- 8. Touch and Hold
- 9. Select Layout



12. 2 Finger swipe to 2 Screen View





#### Work Screen Setup Cont:



- 13. Touch and Hold
- 14. Touch Layout







#### Text Ribbon Setup



1. Touch and Hold Text Ribbon



- Cut/Fill right
- Northing
- Easting
- Elevation
- Design Elevation
- Design Cross Slope
- Design Mainfall
- Vertical GNSS Precision
- Satellite Count
- 3. Touch-Hold-Drag to change position
- 4. Touch Done





#### Blade Focus Point / Vertical Guidance



1. Touch and Hold Blade Icon



- 2. Touch Focus Option
- 3. Touch Vertical Guidance Option
- 4. Touch Apply



5. Touch Blade Icon to change focus point



NOTE: "LINK TO FOCUS" vertical guidance will follow focus point.





#### Import Data With USB





2. Touch USB 3. Touch Select







- 5. Touch Earthworks Data
- 6. Touch Project
- 7. Touch Import



8. Touch OK



9. Touch Cancel Remove USB





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#### **Export Data With USB**

Trimble® Earthwork

FILE TRANSFER



Sync Files with Connected Community Transfer Type Import Files TO Machine То 2 × Cancel

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Trimble<sup>®</sup> Earthworks

Insert USB 1. Touch Transfer Type

1.00

2. Touch Export Files







4. Touch USB 5. Touch Select

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Trimble\* Earthworks

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V OK

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**Remove USB** 



- 7. Touch Earthworks Data 8. Touch Projects
- 9. Touch Export





#### **Cutting Edge Wear / Overcut Protection**



#### 1. Touch and hold Focus Icon



- 4. Enter measured length A and B
- 5. Touch Save



- 7. Touch Advanced Options
- 8. Touch Overcut Protection



#### 2. Touch Edit



#### 6. Sensors will Initialize







#### Select Bolt Hole



1. Touch and hold on Blade Manager Icon





\*\*Note machine must be measured up for additional bolt holes.\*\*





#### Verify System Accuracy

#### Verify the system accuracy by checking into a bench



#### Position the blade tip over the bench point



- 1. Swipe ribbon to view, Northing, Easting, Elevation
- 2. Touch blade focus to match verification location

Trimble® Earthworks .... Motorway.V01 0.00 FT 🛟 0.00 FT + 0 · . -9 35 ()- MANUAL MANUAL MANUAL 🛋 2679756.00 🌵 1284759.70 🌻 2.10 23.70 -6

3. Verify Accuracy Northing, Easting, Elevation

See Supervisor if Northing, Easting and Elevation do not match Project tolerances





#### Vertical Offset / Memories



1. Touch and hold Vertical Offsets



3. Touch Apply to use immediately



4. Touch and Hold Vertical Offsets





5. Touch memories







#### Vertical Offset / Memories Cont:









#### Horizontal Offset



1. Touch and hold Horizontal Offset





- 3. Touch Line OR
- 4. Touch and Select Alignment





5. Touch Select







#### **Cut Fill Mapping**





- 1. Two Finger Swipe to 3 screen view
- 2. Touch Mapping Icon to View

\*\*Cut Fill Mapping will only be visible in Plan, Cross section, and Profile views\*\*





#### **Record Point**



1. Touch and Hold Record Point

Trimble® Earthworks		12:36
RECORD POINT		0
Name	Wallace	2
Work Order	Bad Fill (points)	· Cher
Code	BF4	
Northing	2680013.15	FT
Easting	1285056.61	FT
× Cancel	g Here	✓ Save

- 2. Touch to Edit Name
- 3. Touch and select Work Order





\*\* Note- After recording a point, it will save automatically in Work Order Created during project setup. \*\*

6. Touch done Trimble<sup>®</sup> Earthworks . . . : Motorway.V01 0.00 FT +++ 0.00 FT 🛟 2 (6) 5 8

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8. Touch Point Icon Records Point



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#### Delete / Edit Point:



1. Touch and hold over point created



2. Touch point information



3. Can Edit point information if needed 4. Touch Delete





5. Touch Yes to Confirm Delete (once deleted can no longer retriev)







#### Navigate to Point





1. Touch and hold on Point

2. Touch Point Info



3. Touch Navigate to Point



4. Touch Stop icon once complete





#### Lane Guidance



1. Touch and hold Lane Guidance



3. Touch Next





7. Touch Lane Guidance to Cancel

#### The slope between the two lines will be projected





#### Surface Manager \*\* Will only work in VCL format Designs\*\*





2. Touch Surfaces Manager



- Surface(Maximum of 2)
- 5. Touch Apply





#### Linework Manager \*\* Will only work in VCL format Designs\*\*



1. Touch Work Settings



2. Touch Linework manager



- 5. Select Individual linework
- 6. Touch apply once complete







#### **UTS Setup**





1. Touch Machine Setup

- 2. Touch Positioning Source
- 3. Touch UTS (Right or Left)



4. Touch to Edit/Add UTS



7. Touch to Start



5. Select Channel/ID/Target ID 6. Touch Next



8. Touch to use for guidance





#### **UTS Setup Cont:**









#### **Change Radio Network**

1. Touch System Settings





2. Touch GNSS Correction Source







#### Level Surface





2. Touch Job Setup







- 6. Touch Blade Tip Focus Point
- 7. Place Blade Tip at Elevation and Touch Bench



5. Touch Bench Heading







#### **Sloping Surface**





2. Touch Job Setup



3. Touch Mode and Select Depth and Slope 4. Touch Apply



- 6. Select Blade Tip Focus Point
- 7. Place Blade Tip at Elevation and Touch Bench



5. Touch Bench Heading



8. Touch and Hold Target Mainfall





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#### **Sloping Surface Cont:**



9. Enter Mainfall Slope 10. Touch Apply



11. Touch and Hold Cross Slope



12. Enter Cross Slope 13. Touch Apply



