



Your Construction
Technology Provider

Field Reference Guides

GCS900 Dozer

Version 13.13

SITECH SOUTHEAST TEXAS
SITECH-SETX.COM



SITECH TECHNOLOGY DEALER TRAINING CHECKLIST

System: GCS900 Grader

Version: 13.1

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Cut / Fill Left

Horizontal Guidance

Function Keys (F1-F6)

Zoom In - Out

Next Key

Escape / Go Back

Cut / Fill Right

Power

Menu

USB Port










Enter







GCS900 Dozer Training Display Settings

Version: 13.1



The **Control Box** must be in **Manager's Mode**

1. Press "Menu" 
2. Select "GNSS Accuracy" and Press "OK"
3. Press and **Hold "F6 "** and Press "F2" **Medium Mode**
4. Change "GPS Horizontal error limit:" to "0.30ft or 0.090m" and Press "Next" 
5. Change "GPS Vertical error limit:" to "0.30ft or 0.090m" and Press "OK" Twice
6. Select "Guidance Method" and Press "OK"
7. Use Arrow to change **Adjust cut to avoid overcut:** to "NO" and Press "OK"
8. Select "Increment Switch Adjustment" and Press "OK"
9. Change **Vertical offset increment:** "0.00" and Press "OK"
10. Select "Text Items" and Press "OK"
11. Press "F1"  and Uncheck each Item checked
12. Press "F1"  to select "Cut/Fill Left", "Offline (3D)" and "Cut/Fill Right" (select in order)
13. Press "F3" **Cross-Section**
14. Press "F1"  and Uncheck each Item checked
15. Press "F1"  to select "Cut/Fill Left", "Offline (3D)" and "Cut/Fill Right" (select in order)
16. Press "F4" **Profile View**
17. Press "F1"  and Uncheck each Item checked
18. Press "F1"  to select "Cut/Fill Left", "Offline (3D)" and "Cut/Fill Right" (select in order)
19. Press "F5" **Text View 1**
20. Press "F1"  and Uncheck each Item checked

21. Press “F1”  to select “Design Elev.(3D)”, “Design XSlope (3D)”, “Mainfall (3D)”, “Satellites (3D)” and ”V. GNSS Err (3D)” (select in order)
22. Press “F6” Text View 2
23. Press “F1”  and Uncheck each Item checked
24. Press “F1”  to select “Northing (3D)”, “Easting (3D)”, “Elevation (3D)”, “Mainfall” and “Offline (3D)” (select in order)
25. Press “OK”
26. Select “Save Settings” and Press “OK”
27. Select “Display Settings” and Press “OK”
28. Enter Operator’s Name such as “Joe G” and Press “OK”
29. Press “ESC”  twice to return to operating screen

GCS900 Check Blade Wear

Version: 13.1

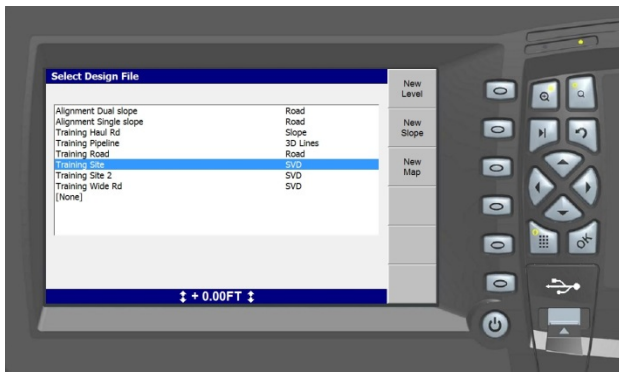
1. Press “Menu” 
2. Select “Blade Wear” and Press “OK”
3. Measure from **Center of Cutting Edge Bolts** to **Bottom of Blade**
4. Do not use **Bolt at Blade Tip**
5. Enter **Distance** and Press “OK”
6. Press “ESC”  to return to operating screen




GCS900 Load Design

Version: 13.1

1. Press “Menu” 
2. Select “Select Design” and Press “OK”
3. Use Arrows  to highlight **Design** and Press “OK”




4. Press “ESC”  to return to the operating screen

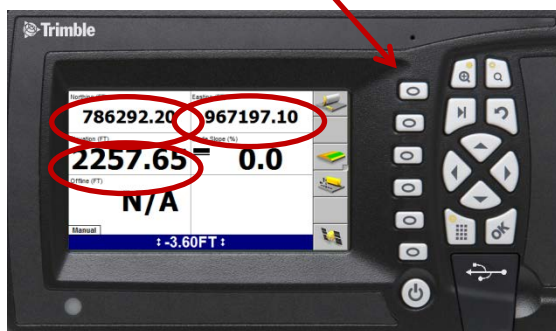
GCS900 Verify System Accuracy


Version: 13.1

Verify the system accuracy at the start of each work day using a Permanent Bench Point





1. Move machine to **Bench Point** with the **Blade low to the ground**
2. Position **Blade Tip** over **Bench Point**
3. Press “Next”  until **Text Screen 2** is displayed
4. Verify correct **Blade Tip** is selected Press “F1” to change **Blade Tip**



5. Verify **Northing**, **Easting** and **Elevation** are correct (**add distance above Bench Point**)
6. See Supervisor if **Northing** and **Easting** do not match
7. See Supervisor if **Elevation** does not match and Press “Next” 

GCS900 Vertical Offset

Version: 13.1

1. Press “F4”  to enter **Horizontal and Vertical Offset**
2. Press “F6” until **Vertical Offset** is displayed at the top left of screen
3. Enter Vertical Offset and Press “F2”  to select above or below **Design**




4. Press “OK” to return to operating screen
5. **Vertical Offset** is displayed at the bottom of the screen



GCS900 Horizontal Offset

Version: 13.1

1. Press “F4”  to enter **Horizontal and Vertical Offset**
2. Press “F6” until **Horizontal Offset** is displayed at the top left of screen



3. Press “F1” **Alignment:**

4. Use Arrows  to Select **[Plan Line]** if list is displayed and Press “OK”

5. Use Arrows  to Select **Line Offset** and Press “F1” **Select**




6. Press **“OK”** and enter **Offset distance**





7. Press **“F2”** Select Offset to be **Left** or **Right** of the line (**-3.00 is Left**)
8. Press **“OK”** to return to operating screen

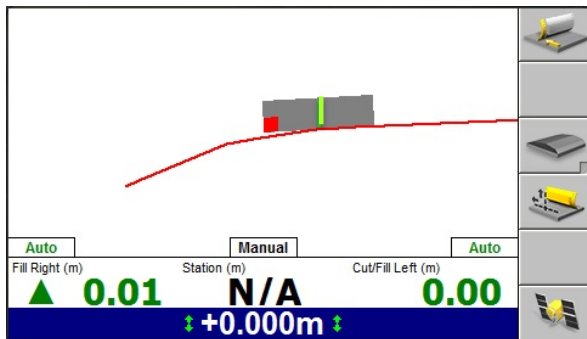


9. **Horizontal Offset** is highlighted in red
10. Press **“F1”**  to change **Blade Left** or **Right**

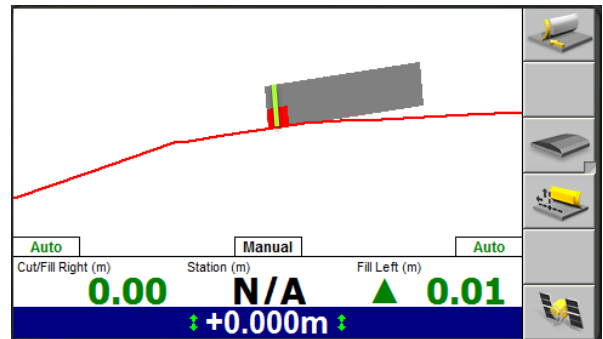
GCS900 Vertical Guidance

Version: 13.1

1. Press “Menu” 
2. Press “Guidance Method” and Press “OK”
3. Change **Adjust cut to avoid overcut:** to “NO”
4. Press “F1” for **Change Method**
5. Select **Method** from list and Press “OK”
6. Press “OK” to accept change
7. Press “ESC”  to return to operating screen







One Point Center is the default setting used for long or wide surfaces. It also allows for shaping crowns by holding the slope past the crown- point.



One Point Focus is used for narrow surfaces such as shoulders or slopes.

GCS900 Cut and Fill Site Map

Version: 13.1

1. Press “Menu”  and select “Mapping/Recording Settings” Press “OK”
2. Change “Mapping for the main screen views” to “Yes” scroll down list
3. Change “Blade tip mapping” to “Automatic on” and Press “OK”
4. Select “Main Screen views” and Press “OK”
5. Under Active views select Cut/Fill “Yes”
6. Under Main Screen Softkeys select Softkey 5 “Mapping On/Off/Auto” and Press “OK”
7. Press “Esc”  to Main Screen
8. Press “F5” until  Mapping only in Automatic is displayed
9. Press “Next”  until Plan View with Cut/Fill Scale is displayed



GCS900 Lane Guidance

Version: 13.1

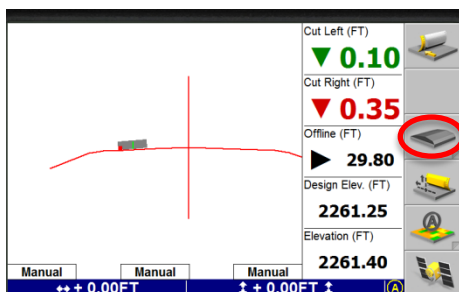
1. Move **Blade Tip with Focus** over Lane to be Extended



2. Press **“F3”** for **Lane Guidance**









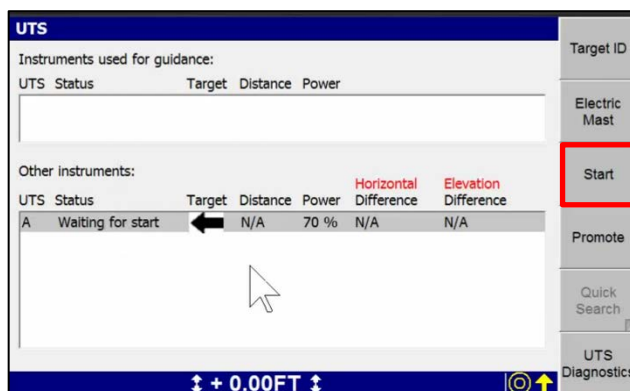
3. **“F3”** turns **Lane Guidance** Off and ON



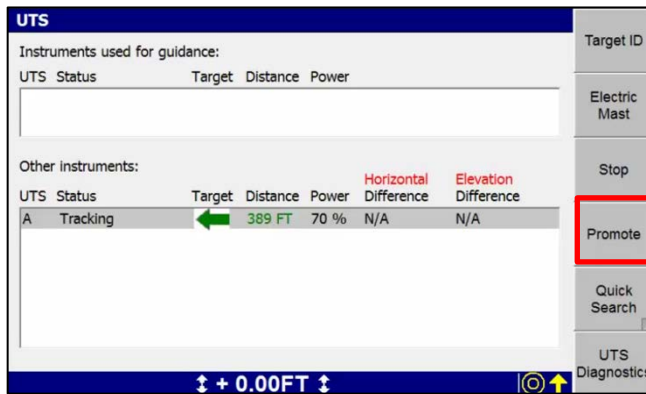
GCS900 UTS Set-up

Version: 13.1

1. Press “Menu” 
2. Press “F4” Mode select “3D UTS”
3. Select “Calibrate Sensors” and Press “OK”
4. Select **Electric mast(s)** and Press “OK”
5. Press “F6”  to **Calibrate Mast**
6. Press “F6”  to **Finish**
7. Press “ESC”  to return to Configuration screen
8. Press “F2” “Installation”
9. Select “Connectivity Settings” and Press “OK”
10. Select “Select Radio Band” and Press “OK”
11. Select “2400 MHz” and Press “OK”
12. Select “Machine Radio Configuration” and Press “OK”
13. Change “Channel” and “Network ID” to match UTS. Notice the Radio Band at the bottom of this window should also say “2400 MHz”, which you set previously. Press “OK”
14. Press “ESC”  twice to operating screen
15. Press “F6”  to **Start UTS**
16. With only one UTS set up, you will see one UTS highlighted in the lower window. Press “F3” to **Start** the UTS

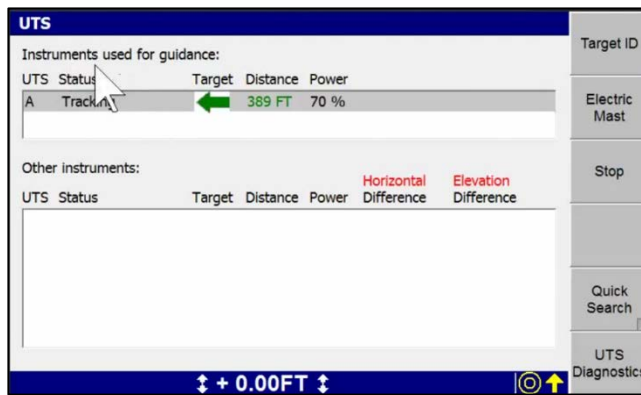


- Wait a few seconds for the UTS to start up, search and begin tracking. When the Target arrow and Distance value turn green, press “F4” to **Promote**.




This moves the UTS into the upper window on the screen.

- Check to make sure the UTS now appears in the Instruments used for guidance window:



- Press “OK” to return to the main Plan view.

- Press and Hold  to open **Bench UTS** screen

Follow instructions to position Blade over Bench Point


- Enter **Elevation** of **Bench Point**

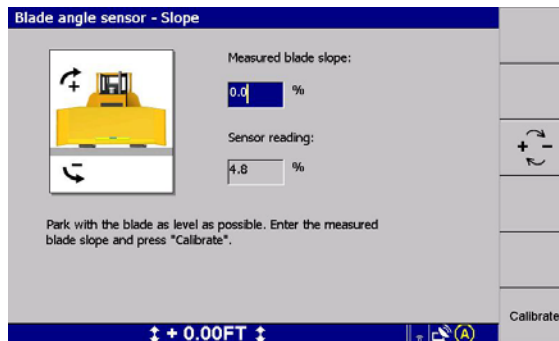
- Press “F5 Left or F6 Right” to **Bench Blade**


Drive to end of work area and check Blade Elevation on a Bench Point to verify Setup

GCS900 Dozer Sensor Calibration

Version: 13.1

1. Press “Menu” 
2. Select “Calibrate Sensors” and Press “OK”
3. Select “Blade angle sensor - Slope” or “Blade slope sensor” and Press “OK”
4. Level the Blade and Enter **0.0%** under **Measured blade slope**:
5. Press “F6” Calibrate




6. Select “Blade angle sensor - Pitch” or “Blade pitch sensor” and Press “OK”
7. Plumb Left Mast and Enter **0.0°** under **Measured left mast pitch**:
8. Press “F6” Calibrate
9. Press “ESC”  twice to return to operating screen



GCS900 Dozer Valve Calibration

Version: 13.1

The **Control Box** must be in **Manager's Mode** to perform a **Valve Calibration**
Machine hydraulic oil must be at normal operating temperature and RPMs
Attach GS420 or AS400 Sensor Mag Mount so the connector is toward the left
Attach Cable to Quick Connector

1. Press "Menu" 
2. Press "F2" for **Installation**
3. Select "**Valve Calibration**" and Press "**OK**"
4. Select "**Lift**" valve and Press "**OK**"

Follow the instructions on each screen

5. Press "**OK**" when complete




Attach Slope Sensor Mag Mount so the connector is toward the Cab

6. Select "**Tilt**" valve and Press "**OK**"

Follow the instructions on each screen




7. Press "**OK**" when complete

8. Press "**ESC**"  twice to return to operating screen







Connect to WiFi GCS900

Version: 13.1

1. Press “**Menu**” 
2. Press “**F2**” Installation
3. Select “**Connectivity Settings**” then press “**OK**”
4. Select “**Wi-Fi Network**” then press “**OK**”
5. Press “**F1**” New
6. Select the Wi-Fi you wish to connect to press “**OK**”
7. Enter “**Pass Phrase**”
8. Press “**F6**” 
9. Press “**F6**” Finish
10. Select the Wi-Fi to connect to Press “**OK**”
11. Press  2 times to return to main menu



TCC Settings GCS900

Version: 13.1

1. Press “**Menu**” 
2. Press “**F2**” Installation
3. Select “**Connectivity Settings**” then press “**OK**”
4. Select “**Connected Community Settings**” then press “**OK**”
5. Enter “**Device Password**” then press “**Next**” 
6. Enter “**Organization**” then press “**Next**” 
7. “**Filespace and Work Group Folder**” should be left to default
8. Press “**OK**”
9. Press  2 times to return to them main screen



Configure Remote Assistant GCS900

Version: 13.1

1. Press “**Menu**” 
2. Press “**F2**” **Installation**
3. Select “**Connectivity Settings**” then press “**OK**”
4. Select “**Remote Assistant Configuration**” then press “**OK**”
5. Enter “**Support Number**”
6. Press “**F1**” Force Upgrade
7. Press “**OK**”
8. Press  2 times to return to main screen




Wireless Data Sync GCS900

Version: 13.1

1. Press “**Menu**” 
2. Press “**F2**” Installation
3. Select “**Connectivity Settings**” then press “**OK**”
4. Select “**Wireless Data Sync**” then press “**OK**”
5. Press “**F1**” Start
6. When synchronization is complete Press “**ESC**”  3 times to operating screen

Start Remote Assistant GCS900



Version: 13.1

1. Press “**Menu**” 
2. Select “**Remote Assistant**” then press “**OK**”
3. Press “**F1**” Start
4. Once  icon appears at the bottom of the screen the machine is connected
5. Press “**ESC**” 2 times  to return to them main screen

Connect to IBSS Base Station GCS900

Version: 13.1

The Control Box must be in Manager's Mode

1. Press "Menu" 
2. Press "F2" Installation
3. Select "Connectivity Settings" then press "OK"
4. Select "GNSS Base Configuration" then press "OK"
5. Select "IBSS-Remote Base"
6. Press "F1" Create New
7. Device Password and Organization should be populated if not see (TCC Settings Sheet)
8. Press "F6"
9. Select the Base from list and Press "F6"
10. Review **IBSS Base Name** and Press "F6" **Finish**
11. Select "**IBSS - Remote Base**"
12. Use left or right arrow keys to select correct base name and Press "OK"
13. Press  2 times to return to operating screen