

Operating Instructions Manual

VIEW

Vision-based Intelligent Electronic Warnings

SG004



June 17, 2024

Disclaimer

Thank you for choosing VIEW. Before you use the equipment, please read and understand this disclaimer. Your safety and the correct use of this equipment are our top priorities.

Safety Precautions

- This manual helps you to use VIEW safely and correctly. If you do not follow the instructions in this manual, you can cause injury or damage.
- Always follow the safety guidelines and rules in your tractor's manual.
- Make sure you install, maintain, and use VIEW as the manufacturer recommends.
- Be careful when you operate the tractor, especially in dangerous or difficult areas.
- Do not change or modify VIEW. This can make it unsafe or cause it to not work correctly.
- Always follow national traffic rules when you use VIEW.

Limited Warranty

- This manual does not give any warranty. All warranties, including implied warranties of merchantability and fitness for a particular purpose, are excluded.
- The manufacturer is not responsible for any damages from using or not being able to use VIEW, including loss of profits, data loss, or business interruption.
- If you change or modify VIEW without the manufacturer's permission, you can void the warranty.

Proper Use and Maintenance:

- Use VIEW only as described in this manual. Using it for other purposes can cause damage or malfunction.
- Regularly check VIEW for wear, damage, or malfunction. Fix any problems immediately to keep it safe and reliable.
- Use only genuine replacement parts and accessories that the manufacturer recommends.

Limitation of Liability:

The manufacturer is not responsible for any damages connected to the use of VIEW, whether based on contract, tort, strict liability, or any other legal theory.



Usage Acknowledgement:

By using VIEW, you agree that you have read and understood this disclaimer and agree to its terms. If you do not agree with any part of this disclaimer, do not use VIEW. This disclaimer can change without notice.

For more information, visit <https://access.agcocorp.com/en/products/view.html> or scan the QR code. You can also find this QR code at the bottom of every page in this document.



Figure 1: QR Code to access all information about the product

Version Control

Version	Date	Description
1.0	May 14, 2024	Initial release
1.1	June 17, 2024	Rephrasing and Formatting

Table 1: Version Control for Operating Instructions Manual



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1 Introduction

Welcome to VIEW. VIEW helps you to be safer anywhere you drive. It is a smart camera system made for agricultural vehicles, giving you extra safety during your work.

Imagine you drive on different terrains—on the road, in the fields, or around your farm. VIEW assists you in all these places. It has advanced computer monitors and cameras that can detect traffic from any direction, helping you see hazards, even those hidden around your vehicle.

Safety is crucial when using heavy machines like agricultural vehicles, and VIEW excels in this area. It uses intelligent technology to switch between different cameras using ISOBUS signals and artificial intelligence to detect dangers in real-time. VIEW alerts you with a beep or a bounding box around the detected object on its 11.6" Full HD screen.

VIEW was developed with help from tractor drivers like you and is designed to solve the challenges you face every day, helping you with blind spots and long hours of work.

VIEW can also be expanded beyond your vehicle. You can add more cameras to trailers, providing comprehensive safety for everything you carry.

As you read this manual, always prioritize safety.



2 Operating Instructions

This section gives instructions for using VIEW. Follow these steps to power on the system, respond to warnings, and use advanced features. These instructions help you use VIEW safely and effectively. Whether you are driving in fields or on roads, you will find detailed information to improve visibility, reduce hazards, and get the most out of VIEW.

2.1 Power On and Initialization

1. Start the vehicle's engine according to the manufacturer's guidelines.
2. Ensure the SMAG Terminal Power and ISOBUS Cable is plugged into the in-cab ISOBUS socket and the SMAG Terminal .
3. VIEW will start automatically after receiving power.
4. Wait for the system to initialize. This process may take up to 30 seconds as the cameras and software boot up.

2.2 User Interface

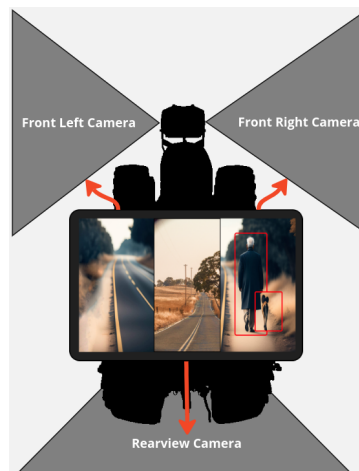
The user interface has two main elements: the **Camera Views** and the **Settings Menu**.

2.2.1 Camera Views

After booting up, you will see the All Camera View Mode. The views will change automatically if ISOBUS signals are available but you can also switch them manually in three available configurations:

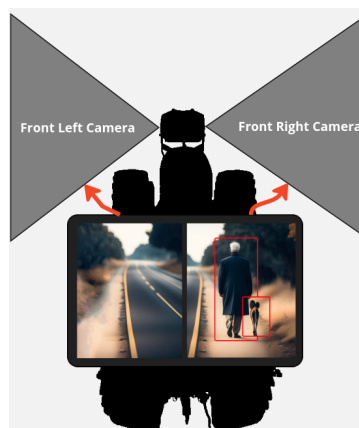


1. All Camera View Mode



In this configuration, the Front Left Camera view will occupy the left side of the screen. The Rearview or Trailer Camera view will be in the middle, and the Front Right Camera view will be on the right side. Each camera view will be evenly distributed horizontally and will extend vertically to fill the entire screen.

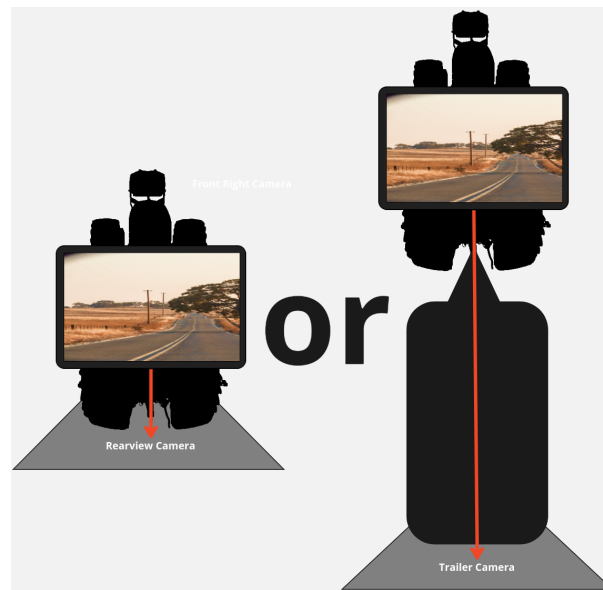
2. Front Cameras View Mode



In this mode, the Front Left Camera will be on the left side of the screen. The Front Right Camera will be on the right side. Both camera views will occupy an equal amount of horizontal space and will extend vertically to fill the entire screen.



3. Rearview or Trailer Camera Mode



In this mode, the entire screen will show the Rearview Camera feed. If a trailer camera is connected, the screen will show the Trailer Camera feed instead.

How do I switch between the different view configurations?

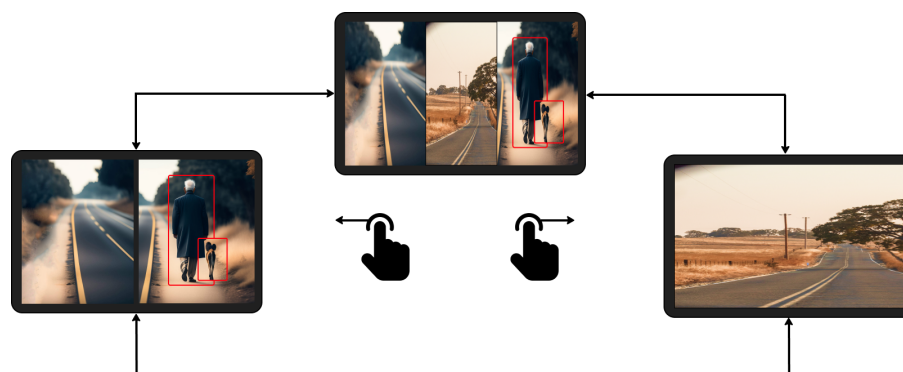


Figure 2: Swipe left or right to change view

To switch between the different camera views, you can slide your finger on the screen from left to right or right to left. This gesture allows for switching between the following modes: **1. All Camera View Mode**, **2. Front Cameras View Mode**, and **3. Rearview or Trailer Camera Mode**.



2.2.2 Settings Menu

In the settings menu, you can find all the options to customize VIEW.

How can I access the Settings Menu?



Figure 3: Swipe down to access the settings menu

To access the Settings Menu, swipe downward from the top to the bottom of the screen. For a visual representation, please refer to the diagram above.

Settings Menu: Widget Overview

In the image below, you can see an overview of the settings interface. The settings menu is organized in a widget structure.



Figure 4: Settings Menu

This section describes each widget's purpose, functionality, location on the screen, and instructions for use.



1. Volume Widget

Volume Widget	
Section	Description
Widget Overview	As part of the hazard alert system, when objects are detected, "VIEW" will alert you with a visual and audible alarm. Within this menu, you can adjust the volume of the audible alarm by moving the slider or completely disabling sound by pressing on the switch.
Instructions	To adjust the volume of the audible alarm, you can move the slider to your preferred level. Alternatively, to completely disable the sound, you can toggle the switch to the off position.



Figure 5: Location on the Settings Menu

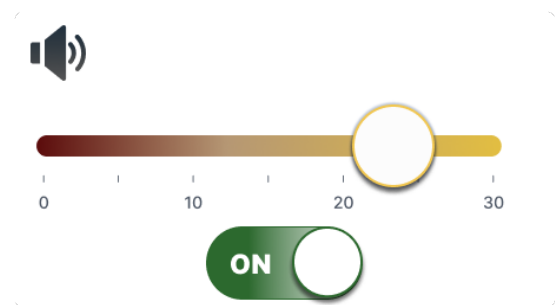


Figure 6: Zoomed in



2. Screen Brightness Widget

Screen Brightness Widget	
Section	Description
Widget Overview	The screen brightness widget allows you to adjust the brightness level of the SMAG Terminal. Additionally, you can choose to enable automatic brightness adjustment. The SMAG Terminal will then use a built-in light sensor to adjust the display brightness automatically.
Instructions	To adjust the screen brightness manually, slide the slider to your desired level. To enable automatic brightness adjustment, toggle the switch to the "AUTO" position. The screen brightness will adjust automatically based on the lighting conditions in the cabin.

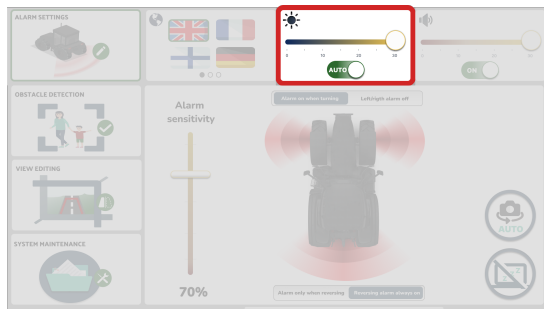


Figure 7: Location on the Settings Menu

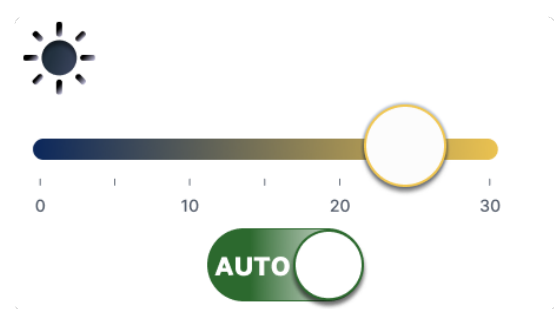


Figure 8: Zoomed in



3. Languages Widget

Languages Widget	
Section	Description
Widget Overview	The languages widget allows you to choose your preferred in-app language by selecting the corresponding country flag.
Instructions	To select a language, simply tap on the flag of the respective country where the language is spoken. Note that only four languages are visible at a time, but you can swipe left or right to access additional options. Currently supported languages in VIEW include: English, Spanish, French, Finnish, German, Danish, Swedish, and Norwegian.

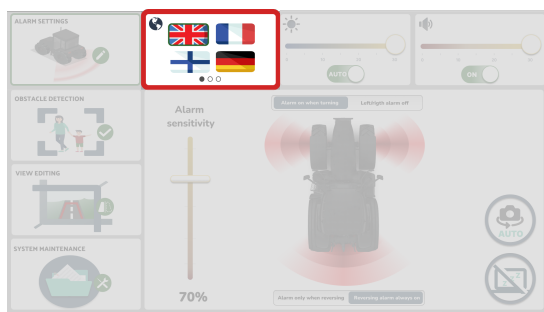


Figure 9: Location on the Settings Menu



Figure 10: Zoomed in



4. Alarm Settings Widget

Alarm Settings Widget	
Section	Description
Widget Overview	VIEW notifies you of hazards using audible and visual alarms. The Alarm Settings Widget allows you to customize how and when you want to be alerted when a hazard is detected.

In the image below, you can see an overview of the Alarm Settings Widget and its location in the Settings Menu.

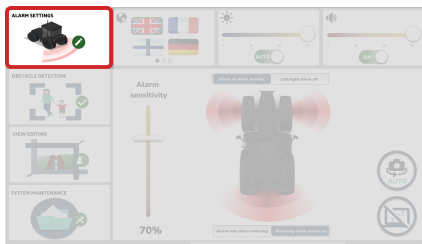


Figure 11: Location on the Settings Menu

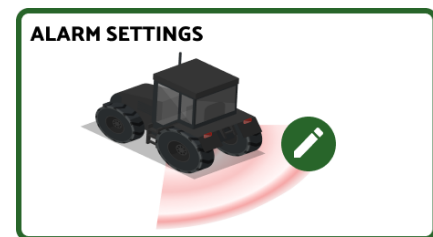


Figure 12: Zoomed in

Instructions

When you press on the Alarm Settings Widget, its contents will open up on the large widget in the bottom right corner.



Figure 13: Alarm Settings Widget Content Overview (divided into 3 parts: Alarm sensitivity slider, Alarms Toggle, and Quick Action Buttons)

This widget is divided into 3 sections:



A) Alarm Sensitivity

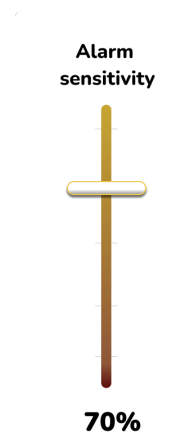


Figure 14: Alarm Sensitivity Slider

On the left side, you will find a vertical slider labeled "Alarm Sensitivity". This slider helps you control how many objects VIEW detects. Lower sensitivity reduces false detections but increases the risk of missing real objects, and vice versa. As you move the slider, the red areas next to the front wheels and rear of the tractor illustration will fade. The lower you set the slider, the more faded these areas become, indicating a higher chance of missing detections.

B) Alarm Toggles



Figure 15: Audible Alarm Configuration

In the middle section, you will find two toggle buttons. At the top, there are options for "Alarm on



when turning" and "Left/right alarm off". Choosing "Alarm on when turning" means VIEW will only sound the alarm when you use the turn signal lever to turn left or right (assuming VIEW is connected to ISOBUS). Selecting "Left/right alarm off" disables this feature.

Moving to the bottom section, the options are "Alarm only when reversing" and "Reversing alarm always on". Selecting "Alarm only when reversing" means VIEW will sound the alarm only when you are in reverse gear (assuming VIEW is connected to ISOBUS). Choosing "Reversing alarm always on" means VIEW will sound the alarm regardless of the gear engaged.

C) Quick Action Buttons



Figure 16: Quick Action Buttons

On the right side, you will find two quick action buttons. If the top one is labeled "AUTO", VIEW automatically switches the camera view to **2. Front Cameras View Mode** when you use the turn signal lever and to **3. Rearview or Trailer Camera Mode** when you engage reverse gear. This feature will only work if VIEW is connected to ISOBUS. Alternatively, if set to "MAN", VIEW will not change camera views using ISOBUS signals, and you will need to adjust it manually.

The bottom quick action button dims the screen completely, putting VIEW into "Sleep Mode" with a black screen. To brighten the screen again, simply tap anywhere on the screen.



5. Obstacle Detection Widget

Obstacle Detection Widget	
Section	Description
Widget Overview	This widget allows you to customize your visual alert preferences, controlling when and how alerts are displayed over camera views. It highlights objects detected by VIEW with bounding boxes.

In the image below, you can see an overview of the Obstacle Detection Widget and its location in the Settings Menu.

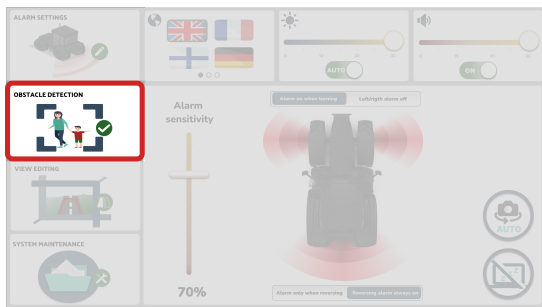


Figure 17: Location on the Settings Menu

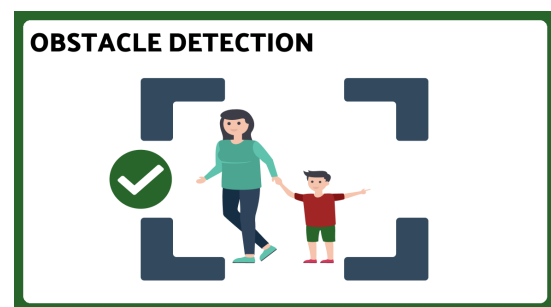


Figure 18: Zoomed in

Instructions

When you press on the Obstacle Detection widget, its contents will open up on the large widget in the bottom right corner.

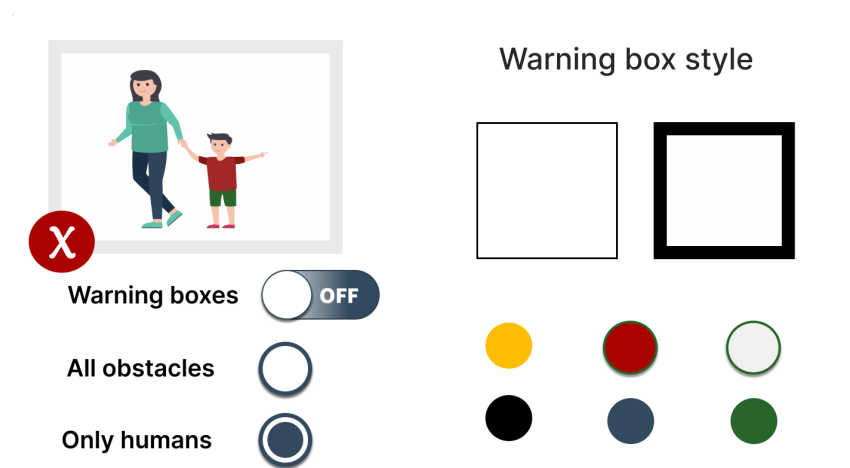


Figure 19: Obstacle Detection Widget Content Overview



This widget is divided into 4 sections:

A) Illustration of Current Obstacle Detection Configuration

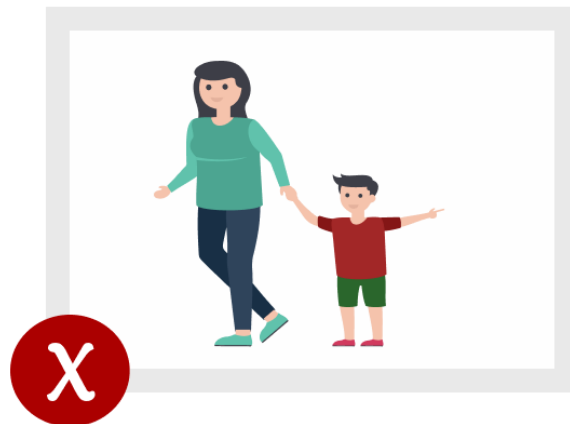


Figure 20: Illustration of Current Obstacle Detection Configuration

This section provides a graphical representation of the current obstacle detection settings. Any changes you make to settings in this widget will be shown in this illustration.

B) "Warning boxes" Switch

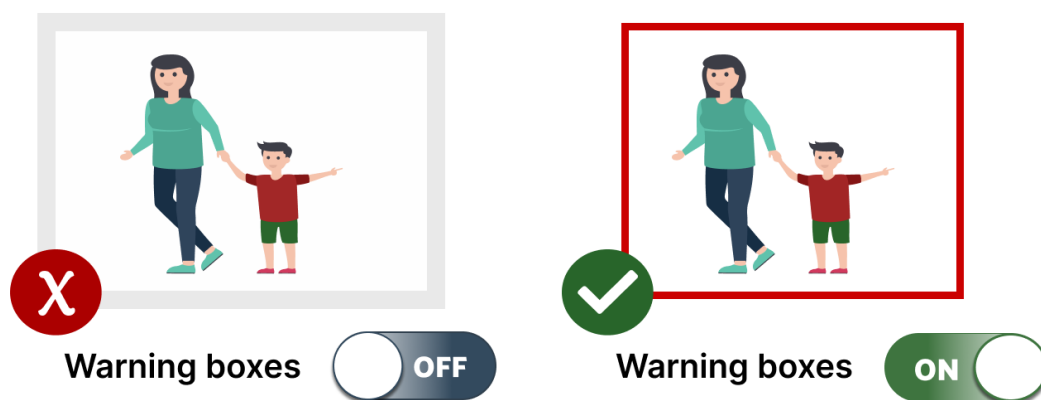


Figure 21: Warning Boxes Switch

Right below the Illustration of Current Obstacle Detection Configuration, you will find the "Warning boxes" switch. Turning it "OFF" removes visual warnings over camera feeds. Turning it "ON" adds bounding boxes around detected obstacles.



C) "All obstacles" vs "Only humans"



Figure 22: All obstacles vs Only humans

Further down, you can choose between detecting "All obstacles" or "Only humans".

- Selecting **"All obstacles"** lets VIEW detect humans, bicycles, cars, buses, trucks, motorbikes, cats, dogs, cows, and horses.
- Choosing **"Only humans"** restricts detection to people, ignoring other objects.

D) "Warning box style"

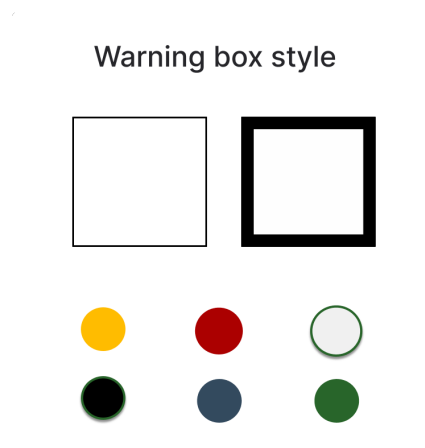


Figure 23: Warning box style

On the right side of the widget, you can adjust the thickness and color of the bounding boxes around detected obstacles. You can choose between two thickness options: "thin," shown with a thin square, and "thick," shown with a thicker square. You can also select from six color options, each shown with a colored circle. The color you select will have a ring around it.



6. Camera View Editing Widget

Camera View Editing Widget	
Section	Description
Widget Overview	This widget allows you to customize your camera view preferences individually for each camera. You can flip the camera view vertically and horizontally, adjust the camera angle, crop the camera view to a specific region, and, exclusively on the rear camera, create and adjust a warning zone.

In the image below, you can see an overview of the Camera View Editing Widget and its location in the Settings Menu.



Figure 24: Location on the Settings Menu

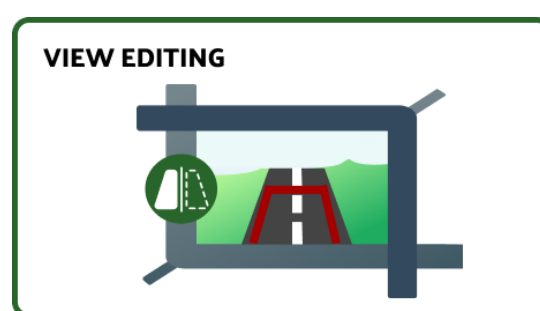


Figure 25: Zoomed in

Instructions

When you press on the Camera View Editing widget, its contents will open up on the large widget in the bottom right corner.

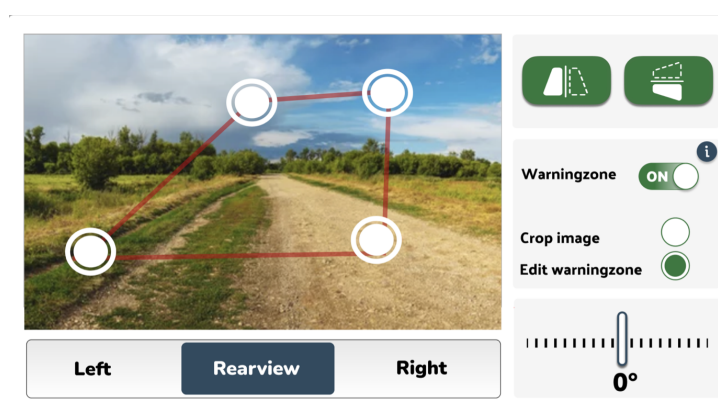


Figure 26: Camera View Editing Widget Content Overview



This widget consists of five main sections:

A) Camera Viewer and Camera Selector Triple Toggle Switch

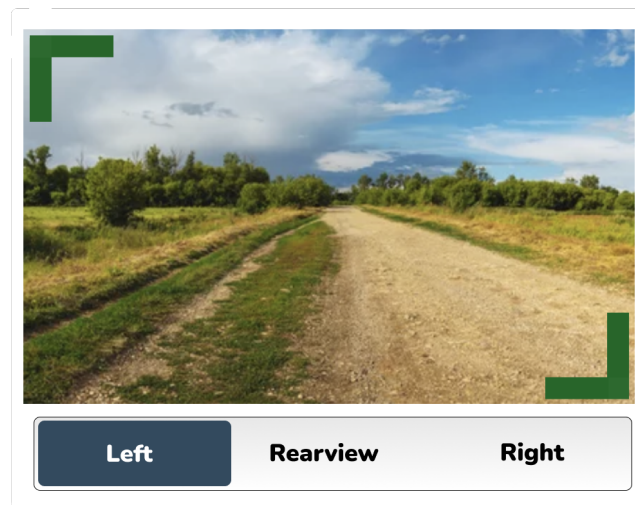


Figure 27: Camera Viewer and Camera Selector Triple Toggle Switch

On the left side of the widget, you will find the camera viewer and camera selector triple toggle switch. The camera viewer displays a live feed from the selected camera, which you can switch between "Left", "Rearview", or "Right" views using the triple switch.

B) Cropping the Camera View

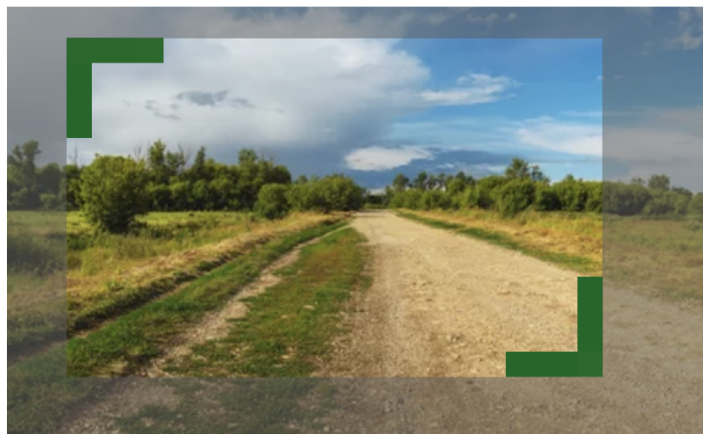


Figure 28: Cropping the camera view

In the camera viewer, there are green 90-degree corner shapes at the top left and bottom right corners. These shapes allow you to crop the image by dragging them to select a specific region within



the camera's field of view. The cropped area will appear grayed out, while the original image remains unchanged. For multiple camera views, repeat this process by selecting a new camera and adjusting the region. The cropped view will be saved automatically.

C) Flipping the Camera View

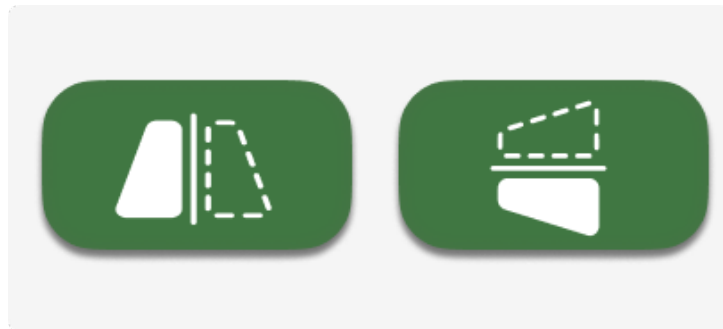


Figure 29: Flipping the camera view buttons

In the top right area of the widget, there are two buttons for vertical and horizontal flipping of the camera view. Pressing the leftmost button flips the image vertically, and pressing the rightmost button flips it horizontally. Changes are saved immediately. To apply flips to multiple camera views, select a new camera and repeat the process.

D) Warning Zone Settings (only available in "Rearview or Trailer" camera)

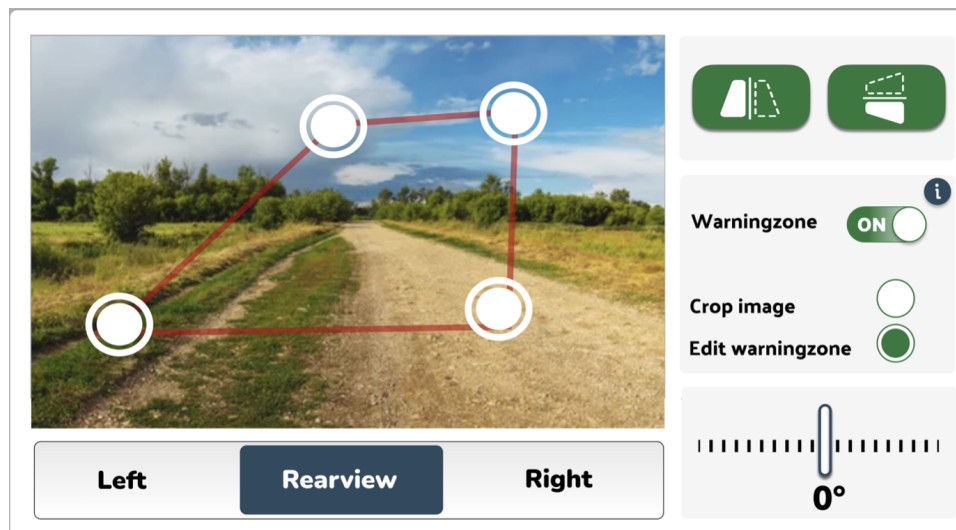


Figure 30: Warning Zone Settings

Below that, users can adjust warning zone settings, which are active only in "Rearview" camera



mode. You can enable or disable the warning zone using the toggle switch and choose between "Crop image" (default) or "Edit warning zone" modes.

To edit the warning zone, select "Edit warning zone" and adjust the white circles to define the boundaries of the zone. Changes are saved immediately. For more guidance within the app, tap the information button next to the toggle switch.

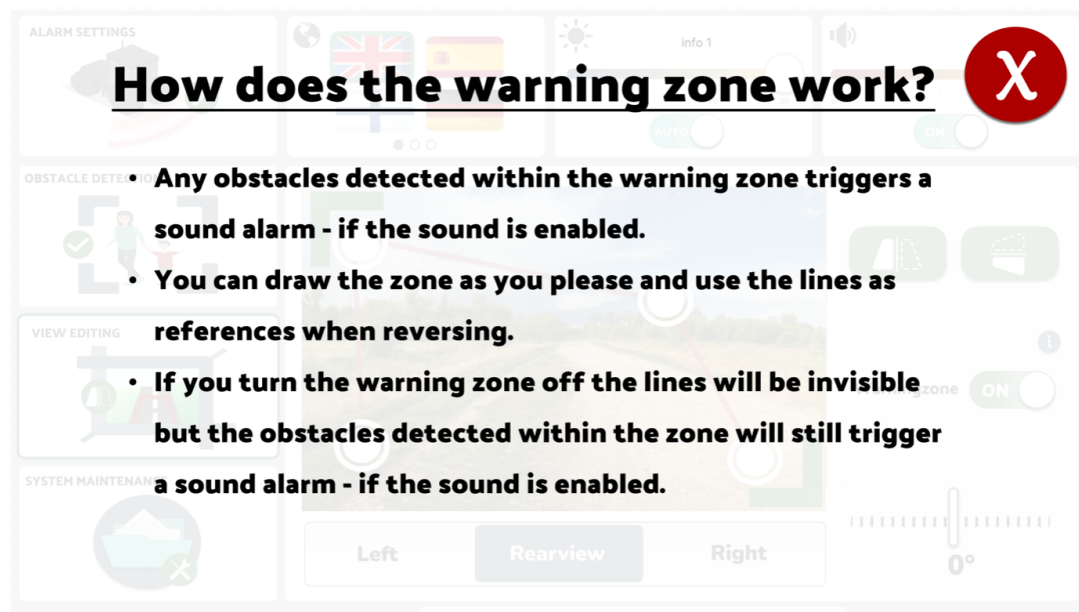


Figure 31: Warning Zone Info Pop Up After Pressing on "Info" icon

E) Changing Angle of Camera View

In the bottom right corner, there is a horizontal slider set to 0 by default. Moving the slider adjusts the image rotation clockwise or counterclockwise. Changes are saved automatically. To adjust rotation for multiple camera views, select a new camera and adjust the rotation accordingly.

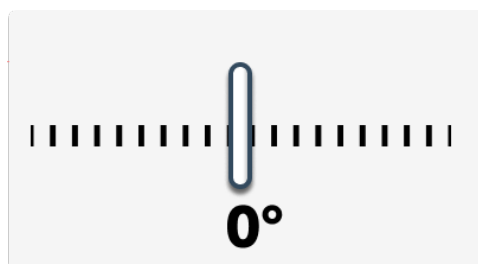


Figure 32: Changing Angle of Camera View Slider



7. System Maintenance Widget

System Maintenance Widget	
Section	Description
Widget Overview	This widget provides you with information about the current status of each camera, the overall status of VIEW, details about the license and terms, a QR code to access more information about VIEW, and a button for restarting the application.

In the image below, you will find an overview of the System Maintenance Widget and it's location in the Settings Menu.

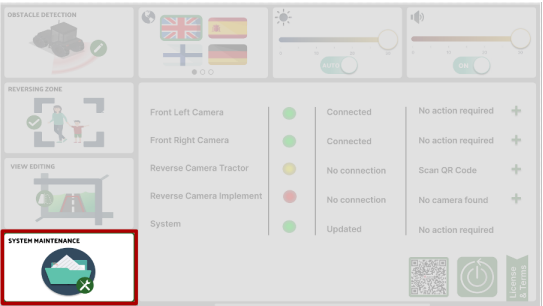


Figure 33: Location on the Settings Menu



Figure 34: Zoomed in

Instructions

When you press on the System Maintenance widget, its contents will open up on the large widget in the bottom right corner.

Front Left Camera	●	Connected	No action required
Front Right Camera	●	Connected	No action required
Reverse Camera Tractor	●	No connection	Scan QR Code
Reverse Camera Implement	●	No connection	No camera found
System	●	Updated	No action required






Figure 35: System Maintenance Widget Content Overview



This widget is structured into three sections:

A) Status Information Table

Front Left Camera		Connected	No action required	
Front Right Camera		Connected	No action required	
Reverse Camera Tractor		No connection	Scan QR Code	
Reverse Camera Implement		No connection	No camera found	
System		Updated	No action required	

Figure 36: Status Information Table

The main part of the widget is where you find the Status Information Table. In the first column, you see a complete list of all cameras, each in its own row. This list includes the trailer camera (Reverse Camera Implement), which matters only if you have two rear cameras—one on the back of the tractor and another on the back of a rear implement like a trailer. If you have only three cameras installed, you can ignore this row. The second column shows an on-screen indicator light for each camera's status: green means no issues, yellow warns of a problem, and red indicates a malfunction. To help you understand, the third column provides a description of the color scheme. If the system detects an error, the fourth column gives you troubleshooting information. Finally, in the fifth column, the "+" icons allow you to access the Camera Portal Page, which is described below.

B) Camera Port Selection

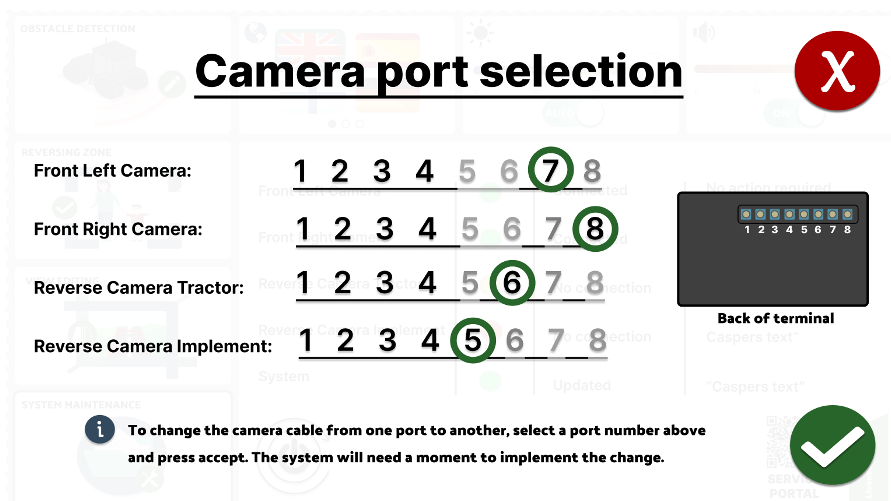


Figure 37: Camera Port Selection Pop Up Configuration Page



You can switch between different camera ports. To do this, go to the camera port selection page. Tap the plus icon next to the new port you want to use, as explained in section A) above. On this page, you will see a list of camera ports connected to different cameras. There is also an image showing where these ports are located on the back of the SMAG Terminal and a written guide on how to switch ports.

Ports that are already in use by other cameras are grayed out and cannot be selected. Once you choose a new port, confirm your selection by tapping the green "Accept" button in the bottom right corner. This action saves the changes, briefly dims the screen, and activates the selected port.

If you visit the Camera Port Selection page without intending to make changes, you can return to the System Maintenance Widget by tapping the red "Exit" button in the top right corner.

C) Restart Application

To restart the VIEW application, you can press the "Restart" button located at the bottom of this widget, as shown in Figure ???. Once you click on the "Restart" button, VIEW will automatically reboot. Please be aware that the restart process will take approximately 30 seconds.



Figure 38: In-app Restart Button. Press to restart VIEW application.

D) Service Portal Access



Figure 39: Service Portal QR code

At the bottom right corner of the widget, there is a QR code. When you scan this QR code, it will take you to a website where you can find extensive information such as production details, installation guides, FAQs, video tutorials, the manual, and more.



2.3 Power Off and Shutdown

To power off and shut down VIEW, follow these instructions:

1. Turn off your vehicle's engine according to the manufacturer's guidelines.
2. If VIEW is still powered up, disconnect the \nameWirePowerIsobus from your vehicle's power socket.
3. VIEW will then shut down automatically after you disconnect the power.

