AR-6 Operating Guide

AR-6 Operating Guide

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Introduction

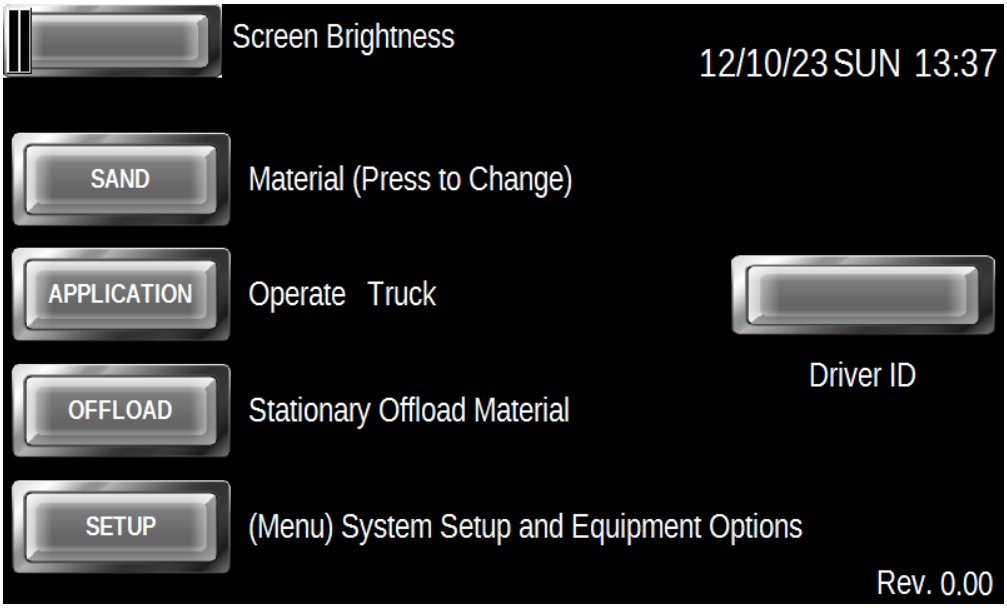
This document will cover how to operate your AR-6 system. It is a very small manual because the system is so simple to operate.

First, familiarize yourself with the screens by going to the section AR-6 Operator Quick Reference at the end of this manual.

The system is controlled by 8 Buttons and a Trigger on the Joystick along with three knobs mounted at the side of the armrest.

Lighting, Tarp and Tailgate are controlled by six switches on the face of the armrest.

Sanding Control



The mode of the system is controlled by system setup. This is the Sanding Application mode.

Material can be changed to any of the four programmed selections.

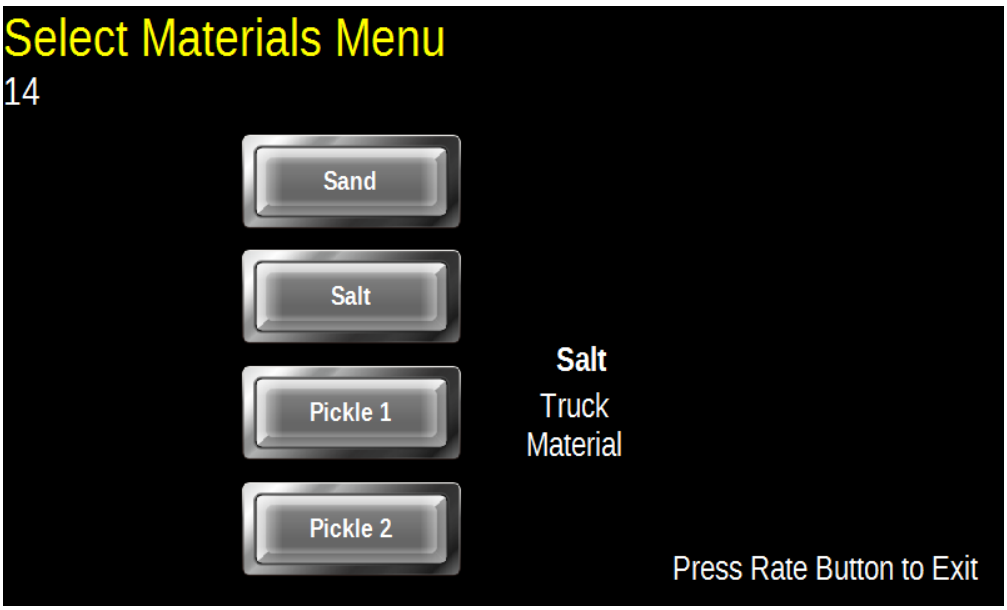
Application will take you to the operating screen for the Sanding System.

Offload will take you to a screen to run the Conveyor, Spinner and Gate manually to offload material from the hopper if required.

Setup can only be entered by having a Thumb Drive that is activated with a special code.

The screen brightness is adjusted from this screen with the slider control at the top left.

Material Selection

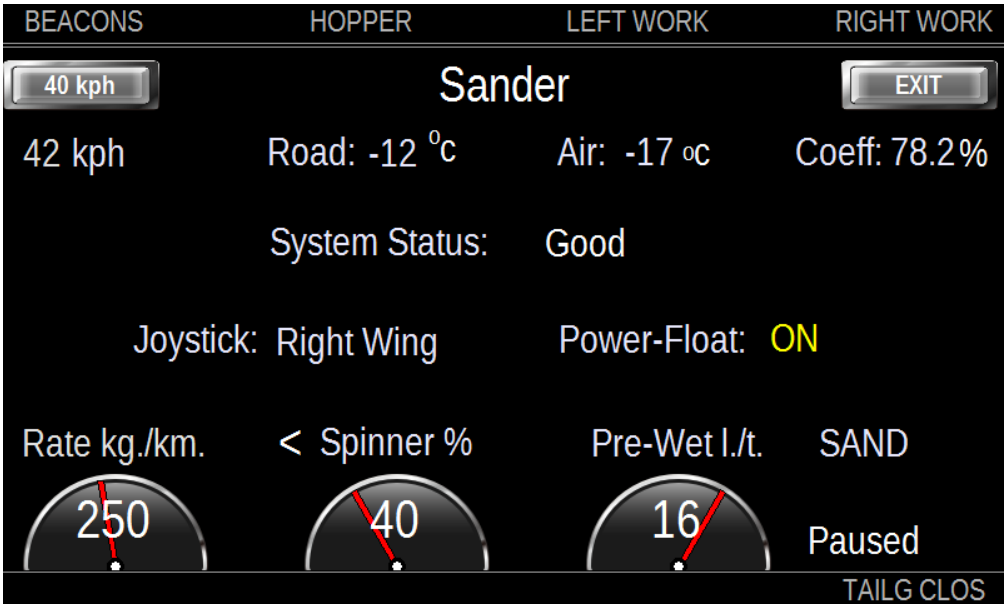


The AR-6 has four materials built in. Pressing the Rate knob from the screen above will take you to this screen.

Select the material by pressing on the button and press the Rate knob again to exit back to the operator selection screen.

Selecting the material loads all of the pre-programmed rates, gate settings and material calibration for that material.

Sanding Screen



The Sanding screen features switch monitoring for the six switches on the face of the armrest. These are located at the top and bottom of the screen and advise the operator which switches are active.

The 40 kph button will simulate the truck moving at 40 kph to allow the operator to test the functions of the truck in the yard.

Exit will shut the sanding system down and return to the operator select screen.

Environment including truck speed, temperatures and future coefficient of friction are displayed on the line below.

System Status displays any non-persistent alarm conditions such as Conveyor Fail.

The selected joystick mode is displayed on the next line down.

Rates are displayed on an easy to read set of dials in the lower part of the screen. The truck operating status is displayed to the right.

Sanding Control Knobs

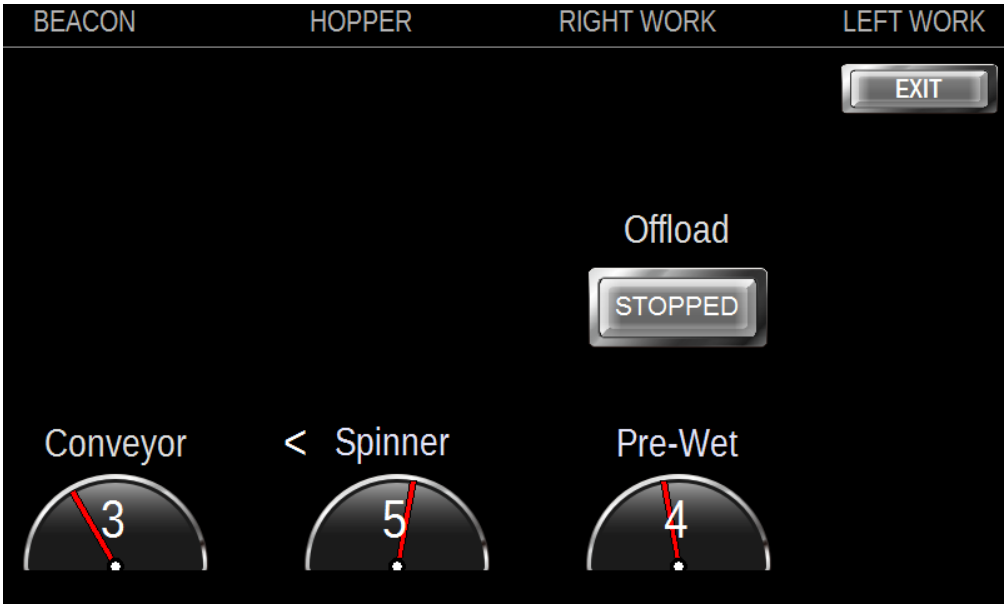
There are three knobs located at the right side of the armrest. they are laid out the same order as the Sanding Screen dials.

Spinner: The leftmost control is the spinner speed. Pressing on this button for 2 seconds reverses the spinner direction. This is displayed on the screen as an arrow on either side of the Spinner % on the screen.

Rate: The centre control is the rate control is used to select the material from the Operator Select Screen as well as the material rate during the sanding process.

Pre-Wet: The Pre-Wet Rate is controlled by the knob closest to you. Pressing on this knob for two seconds while the truck is stopped will activate the Pre-Wet Purge if installed.

Offload Spreader Screen

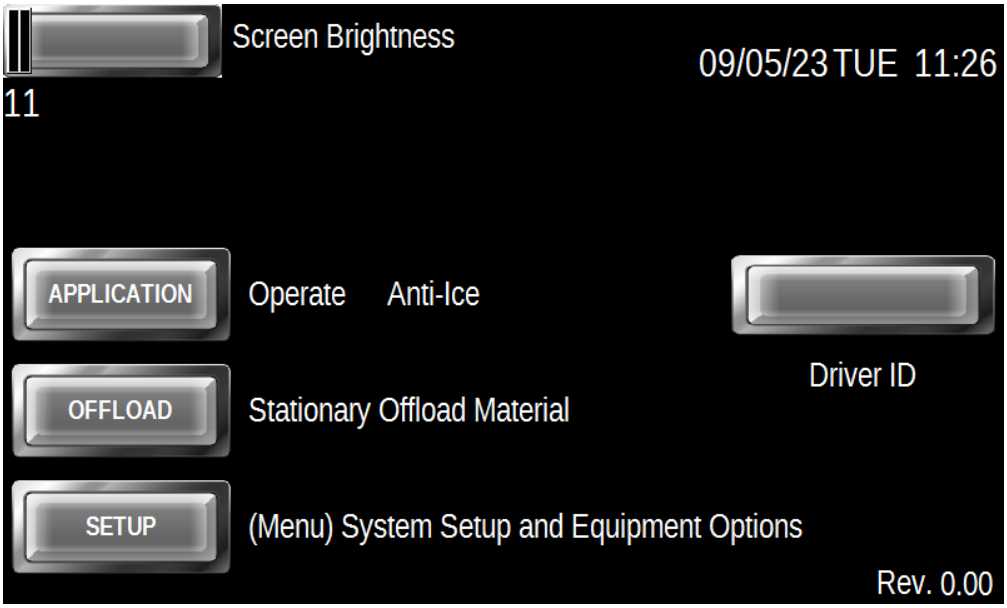


Offload Spreader allows the operator to manually control the Conveyor, Gate, Spinner and Pre-Wet systems to offload excess material.

The three rotary knobs control the Conveyor, Spinner and Pre-Wet while the gate is controlled by the centre two buttons on the Joystick.

Offloading can be started and stopped by pressing the Offload button on the screen. Exit will return you to the startup screen.

Anti-Ice Control



The mode of the system is controlled by system setup. This is the Anti-Ice Application mode.

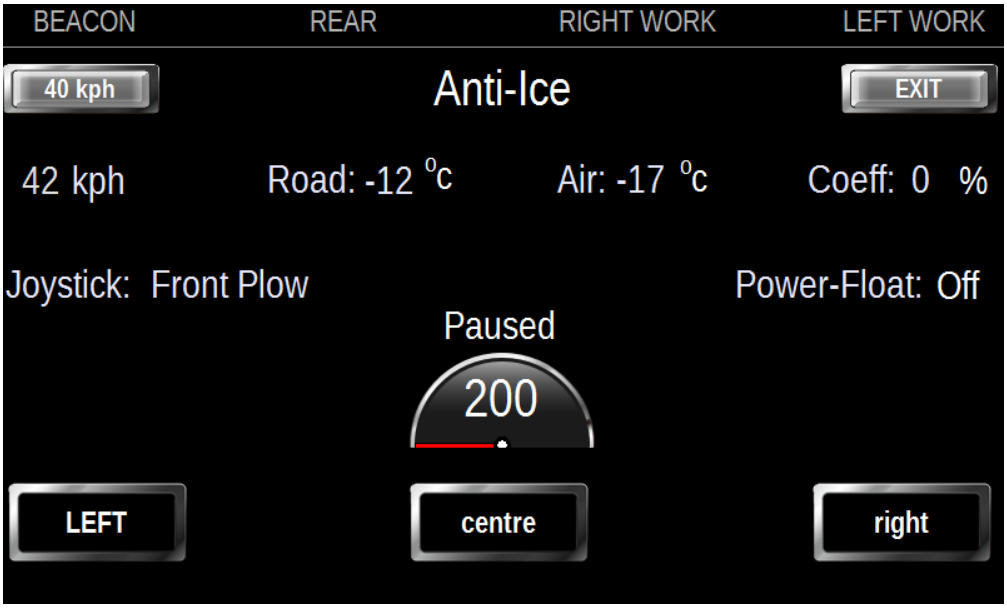
Application will take you to the operating screen for the Anti-Ice System.

Offload will take you to a screen to run the Anti-Ice pump, Lane Control Valves and two Auxiliary Valves manually to offload material from the tank and transfer liquids as needed.

Setup can only be entered by having a Thumb Drive that is activated with a special code.

The screen brightness is adjusted from this screen with the slider control at the top left.

Anti-Ice Screen



The Anti-Ice screen features switch monitoring for the six switches on the face of the armrest. These are located at the top and bottom of the screen and advise the operator which switches are active.

The 40 kph button will simulate the truck moving at 40 kph to allow the operator to test the functions of the truck in the yard.

Exit will shut the Anti-Ice system down and return to the operator select screen.

Environment including truck speed, temperatures and future coefficient of friction are displayed on the line below.

The selected joystick mode is displayed on the next line down.

Rates are displayed on an easy to read set of dials in the lower part of the screen. The truck operating status is displayed above the Rate display. In this example the LEFT lane is on and is indicated by the upper case characters.

Anti-Ice Control Knobs

There are three knobs located at the right side of the armrest. they are laid out the same order as the lane indicators on the Anti-Ice Screen.

Pressing on any of the three knobs will toggle the status of the lane. Press has to be held for 2 seconds.
The centre knob is the Rate control.

Offload Anti-Ice Screen

There are three knobs located at the right side of the armrest. they are laid out the same order as the lane indicators on the Anti-Ice Screen.

Pressing on any of the three knobs will toggle the status of the lane. Press has to be held for 2 seconds. Lanes that are on show in upper case characters.

The centre knob is the Rate control.

Offloading can be started and stopped by pressing on the Offload button on the screen. There are two valve controls on the left to allow more complex control over the offload.

Joystick

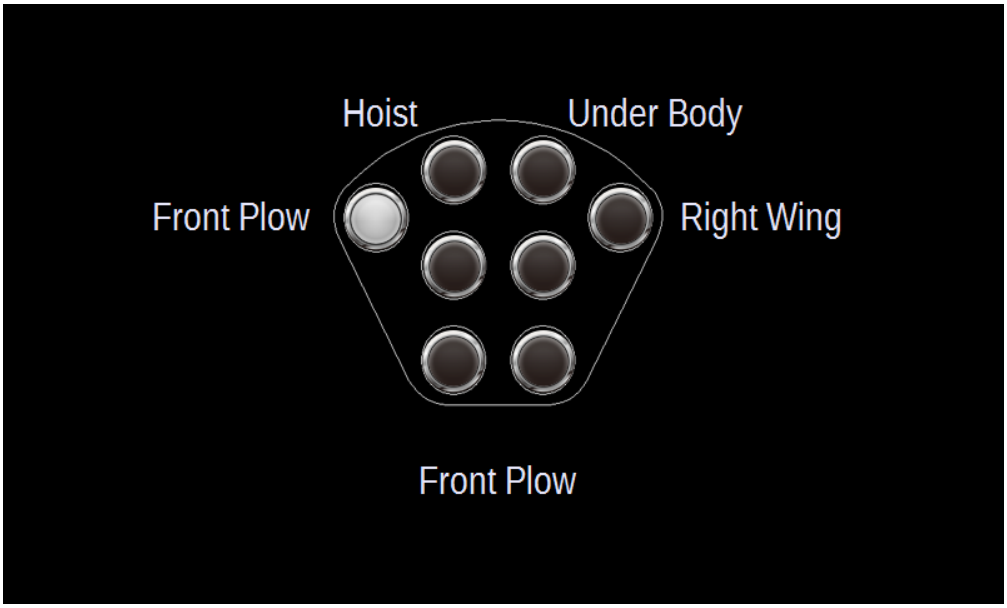
The AR-6 Joystick has eight buttons on the faceplate as well as a momentary two way trigger with centre off.
The upper 4 buttons select the assignment of the Joystick to the hydraulic functions such as Front Plow, Hoist and Auxiliary plows. The Joystick must be centred to change functions.

Pushing the trigger up toggles the Power Float on and off. This is common to the both the Sander and Anti-Ice systems.

Sanding: The Centre two buttons operate the gate if it is hydraulic manual. Blast will run the system at the programmed rate 10. Pause stops all sanding functions.

Anti-Ice: Only the Joystick assignment above and pause buttons are active. Pause stops all Anti-Ice functions.

Joystick Graphic



Select the Joystick Function by pressing on the button for the function you require. A graphic will show you what is selected.

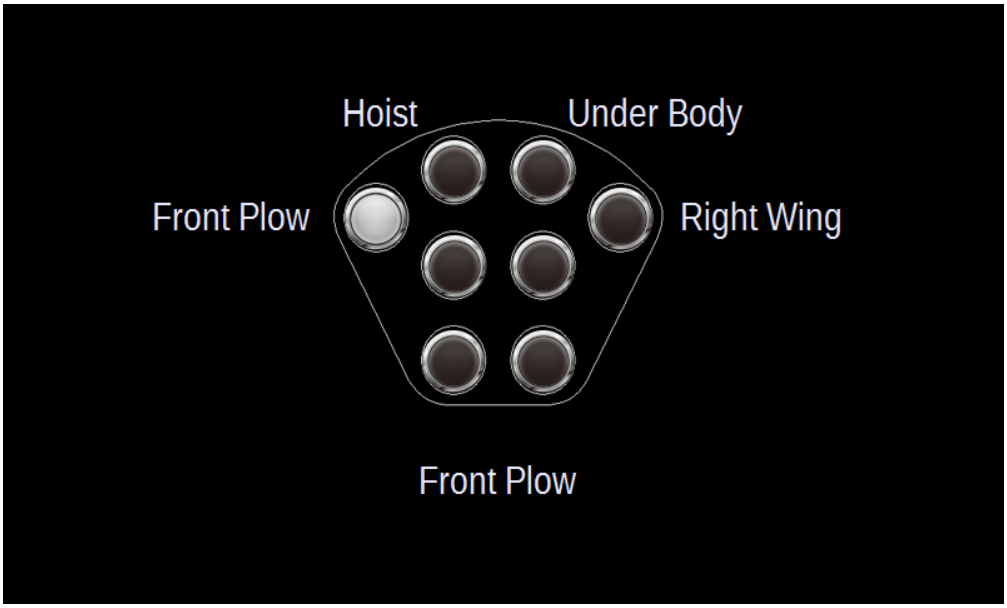
The AR-6 operates in one of three modes which is set during the truck setup.

Mode 1: Dead-mans Trigger Required. In order for any Joystick function the trigger must be pulled back. If the trigger is pulled back the Joystick will operate the selected function.

Mode 2: Priority Front Plow Mode. Without the trigger being pulled back the Joystick operates the front plow. When the trigger is pulled bac the Joystick operates the function as displayed in the middle of the screen.

Mode 3: Dead-mans Trigger Not Required. The Joystick will operate the selected plow with or without the trigger being pulled back.

Joystick Functions



The Front Plow (Joystick 1) is a standard 4 way control and has pre-programmed Panic Assignments.

Panic State is created by Puling the Joystick Trigger Back and pressing the Blast Button. A Panic State is exited after the pre-programmed panic time or movement of the Joystick in any direction.

Joystick 2 is the Hoist (Y Axis) and Pup (XAxis).. Joystick 3 is the \Under Body and Joystick 4 is the Wing Plow.

Your system may have different Names as the setup was done.

If the Extended Wing Function is enabled Joystick 3 will only use the Y Axis for up/down control. If it is not enabled Joystick 3 will be a full 4 way plow.

If the Extended Wing Function is Enabled Joystick 4 will be expanded into a six way plow so as to operate a Wing with Extend Function. To use this Extend Function you must be holding the Joystick 4 Button when you first move the Joystick. This will then assign the X Axis to the Extend/Retract Functions and leave the Y Axis as Up/Down Functions.

Alarms and Alerts

Non-persistent Alarms

Non-persistent alarms provide an alert to the operator that a condition exists that is extraordinary.

Under Application alerts the operator that the system cannot apply at the current truck speed and rate settings. Slowing the truck down or reducing the rate setting will clear the alarm.

Panic confirms to the operator that they have declared a panic by pulling the trigger and pressing blast at the same time. This will cause all plows to return to a safe position rapidly. The alarm condition will clear after 15 seconds or by moving the joystick.

Conveyor Fail indicates the loss of Conveyor signal. It flashes a warning and sounds a beep for 2 seconds. The message “Conveyor Fail” will display in System Status line and the system will go into Ground-speed mode.

Pre-wet Pulse Fail indicates the loss of Pre-wet signal. It quickly flashes a warning and sounds a beep. The message “Pre-Wet Fail” will display in System Status line and the Pre-wet system will go into manual mode.

Gate Fail indicates the loss of Gate position signal. It quickly flashes a warning and sounds a beep. The message “Gate Fail” will display in System Status line and the Gate will go into manual mode.

Anti-Ice Fail indicates the loss of Anti-Ice flow meter signal. It quickly flashes a warning and sounds a beep. The message “Anti-Ice Fail” will display in System Status line and the system will go into ground-speed mode.

Persistent Alarms

Persistent Alarms indicate a condition exists that can affect safety of or cause mechanical damage to the equipment.

They are designed to force the driver to exit the application and have the truck return to the shop for repair. The screen flashes and sounds beeping until the operator exits the application.

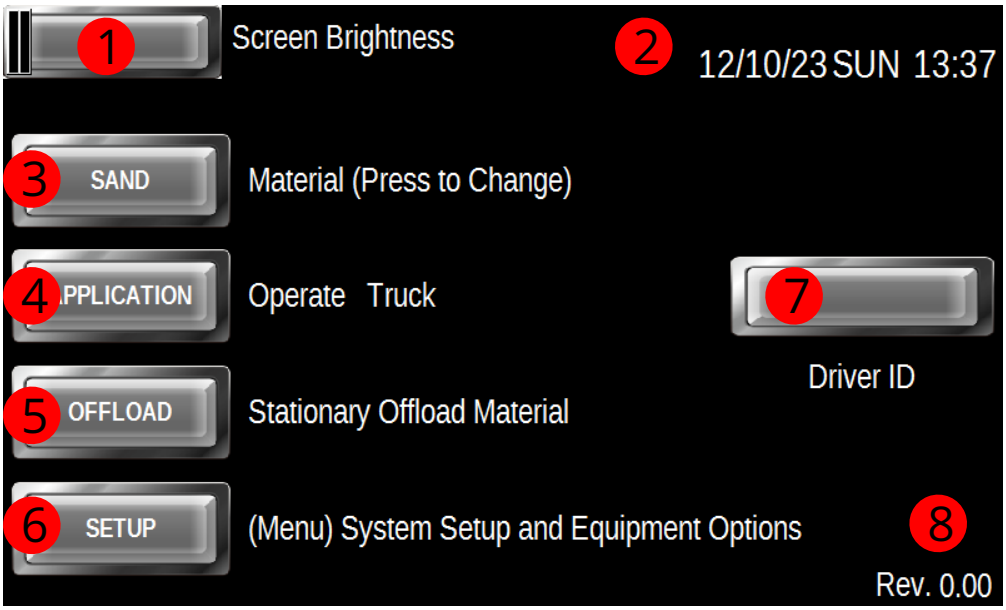
Low Oil Alarm indicates a low oil condition. The only way to clear this alarm is to add hydraulic oil to the tank.

Communication Alarms indicate a loss of communication with a valve driver module. This will result in the operator to lose control over the system. The only way to clear the alarm is to have the problem corrected

Box Alarm indicates a condition where the Box is not down and the truck has ground speed. Lowering the Box will clear the condition.

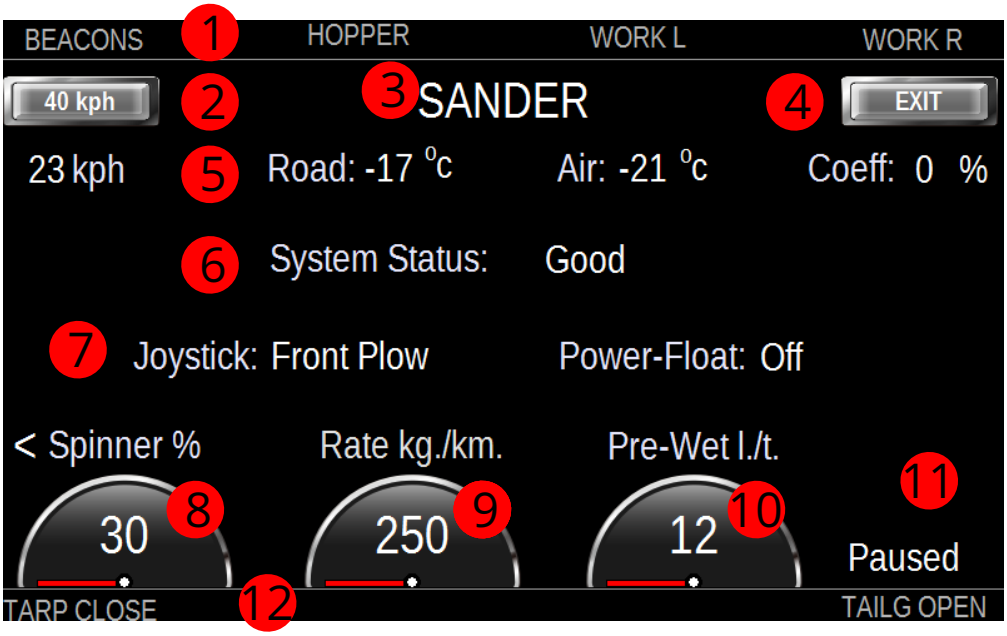
AR-6 Operator Quick Reference

Start Screen



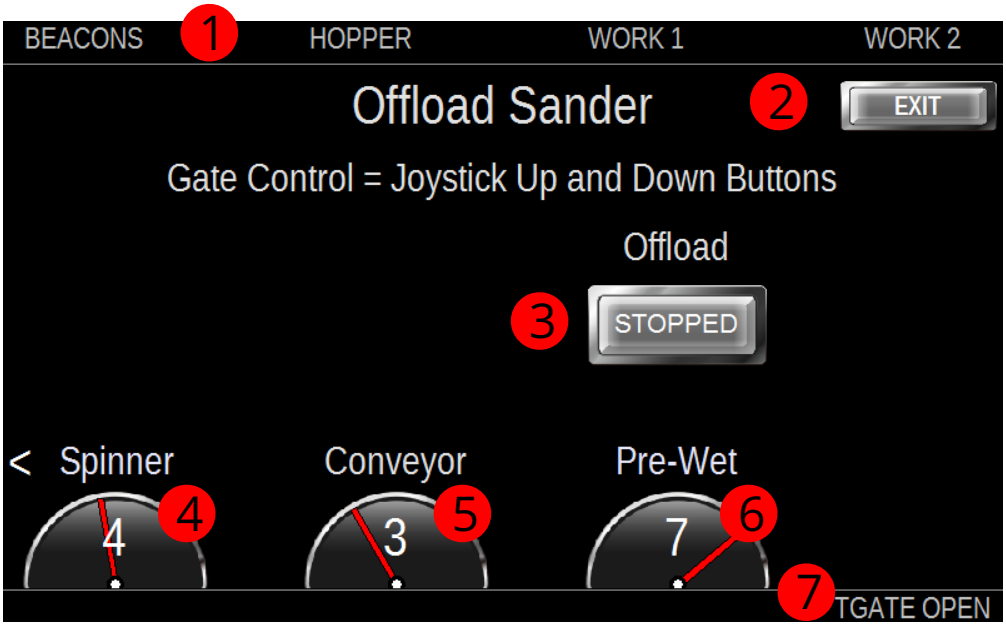
1. Screen Brightness Adjust Slider for day and night driving
2. Current Date and time
3. Material Selector (Blank if System is Ant-Ice or Truck Mode)
4. Start Application
5. Offload Material
6. Setup (Have to have Key Fob in USB Port)
7. Driver or Route ID (Optional)
8. System Firmware Revision Number

Sander Screen



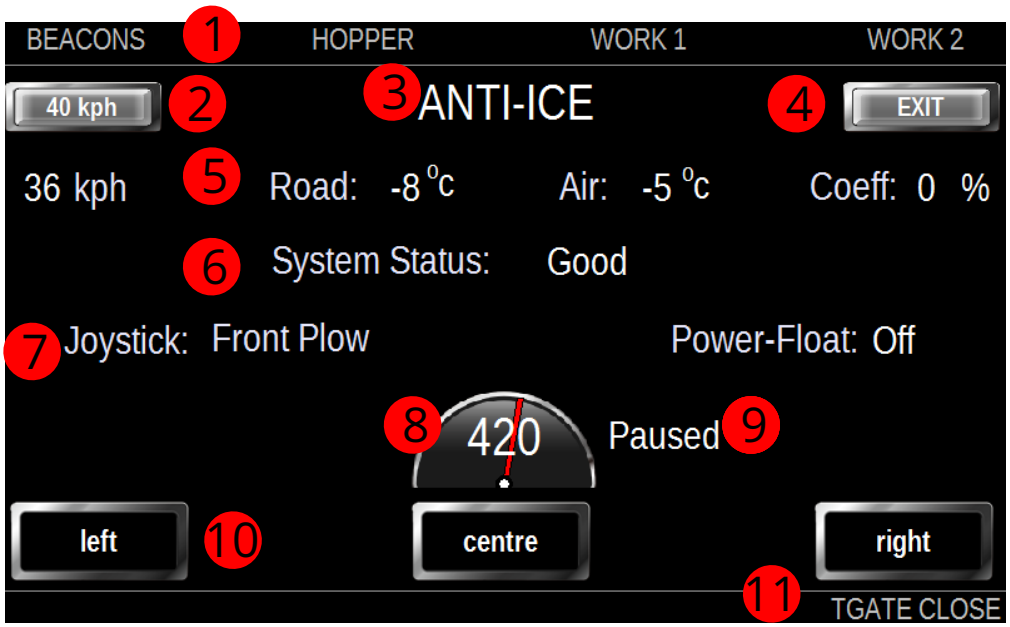
1. Lighting Information
2. Simulate 40 kph Speed for stationary testing (Alt. Ground Speed)
3. System Type and Alarms Display
4. Exit Sanding System and return to Start Screen
5. Environment Bar (Truck Speed Road/Air Temp and Coefficient of Friction)
6. System Status to show any Alarm Conditions
7. Joystick and Power-Float Modes Bar
8. Spinner Setting (Press Knob for 2 Seconds to Change Direction)
9. Application Rate Kg/km
10. Pre-Wet Rate l/t
11. Sander or Pause Display
12. Tarp and Tailgate Status Bar

Sander Offload Screen



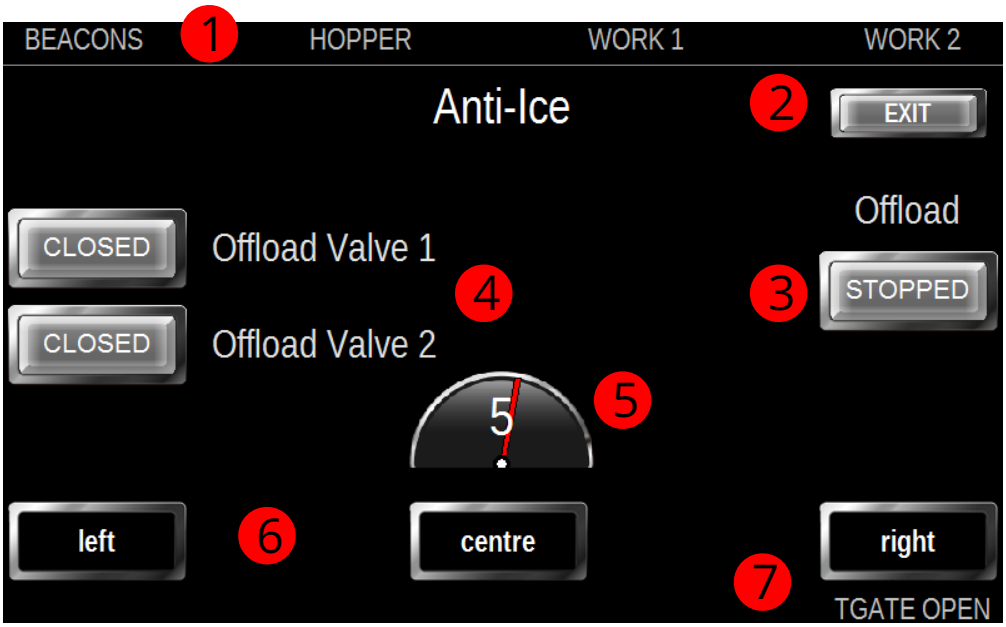
1. Lighting Information
2. Exit Sanding System and return to Start Screen
3. Offload Control (Press to Start and Stop Offload
4. Offload Spinner Setting
5. Offload Conveyor Setting
6. Offload Pre-Wet Setting
7. Tarp and Tailgate Status Bar

DLA Anti-Ice Screen



1. Lighting Information
2. Simulate 40 kph Speed for stationary testing (Alt. Ground Speed)
3. System Type and Alarms Display
4. Exit Sanding System and return to Start Screen
5. Environment Bar (Truck Speed Road/Air Temp and Coefficient of Friction)
6. System Status to show any Alarm Conditions
7. Joystick and Power-Float Modes Bar
8. Anti-Ice Application Rate (Litres per Lane Kilometer)
9. Anti-Ice or Pause Display
10. Lane Status Bar (Upper Case is Open)
11. Tarp and Tailgate Status Bar

DLA Anti-Ice Offload Screen



1. Lighting Information
2. Exit Anti-Ice Offload and return to Start Screen
3. Offload Control (Press to Start and Stop Offload
4. Offload Control Valves (Press to Open and Close)
5. Offload Anti-Ice Rate Setting
6. Anti-Ice Lane Status (Uppercase is Open)
7. Tarp and Tailgate Status Bar