

T3RRA



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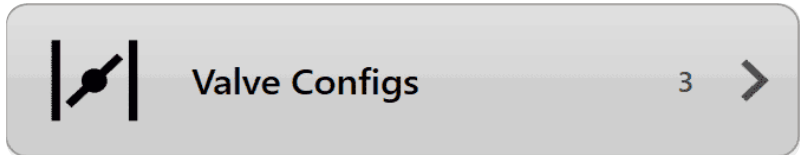
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4.5 | Configuring Valve Outputs

The **Valve Configs** page is used to set up the control output interface for each control function. Appropriate signals of that interfacetype are then generated when automatic or manually controlling the implement. External joystick inputs are also configured on this page when making use of an analog or J1939 CANBUS joystick.



Settings

Application Equipment **COMMAND** Project Limits GPS Advanced

Oil temp: 51°C

Height

X-Slope

Valve

Valve Interface

JD CAN

Valve Selection

SCV1

None

SCV1

SCV2

SCV4

Joystick

☐ External Joystick Control

Joystick Interface:

Analog

Joystick Axis:

Axis 1 Input

☐ Invert joystick axis

Override Behaviour

Disengage

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At the top left corner of the screen, buttons will be shown if there are two available control functions. If using a Height control only machine profile, only the Height page is displayed.

Selecting the Valve Interface

Select the appropriate **Valve Interface** for the tractor, machine or external valves being used for that function. To begin with, set the desired **Valve Interface** type for the Height control function.

i Different **Valve Interface** selections display different **Valve Number** selections depending on how they work - for more information please see the section in the **COMMAND** manual.

Selecting the Valve Number

When selecting **Valve Interface** options like JD CAN, J1939 and Fendt ONE will only display valve numbers that have been detected on the ISOBUS or machine CANBUS.

Once detected on the ISOBUS or machine CANBUS, any available SCV / Remote / Auxiliary valve selections will be displayed in the **Valve Selection** list as shown:

The screenshot shows the T3RRA settings interface. At the top, there are tabs: Application, Equipment, COMMAND (selected), Project, Limits, GPS, and Advanced. Below the tabs, there's a 'Settings' label and a 'Back' button. The main area is divided into two columns. The left column has a vertical menu with 'Height' and 'X-Slope' options. The right column contains two main sections: 'Valve' and 'Joystick'. The 'Valve' section has a 'Valve Interface' dropdown set to 'JD CAN' and a 'Valve Selection' dropdown set to 'SCV1'. Below the 'Valve Selection' dropdown is a list of options: 'None', 'SCV1' (highlighted), 'SCV2', and 'SCV4'. The 'Joystick' section has an 'External Joystick Control' checkbox, a 'Joystick Interface' dropdown set to 'Analog', a 'Joystick Axis' dropdown set to 'Axis 1 Input', an 'Invert joystick axis' checkbox, and an 'Override Behaviour' dropdown set to 'Disengage'.

Analog valve interfaces such as Proportional Solenoid and PWM to 0-5V always display all available **Valve Selection** options. Valve signals for these selections generally rely on harnessing to connect the outputs of the **COMMAND** ECU to the proportional solenoid or laser system inputs.

Valve Status

Valve Status provides information on the current status of the selected **Valve Interface** and **Valve Selection**. The table below explains each of the different possible valve statuses that may appear:

Status	Description
Valve Unavailable	The selected valve is not available for use.
Waiting for Manual SCV Input	Move the SCV lever corresponding to the selected SCV - this must be done when using John Deere tractors.
Short to Ground	An overload has been detected and the resistance between the valve signal output pin and ground is near-zero, holding the output low.

Short to Batt	An overload has been detected and the valve signal output pin is being fed power from another source holding the output high.
Open Load	A connection or valve issue has been detected, and the resistance between valve signal output pin is too high, indicating a broken wire or valve solenoid/coil.
SCVs Locked	The SCVs must be unlocked using the console SCV padlock button.
System Not Armed	The COMMAND Arm/Engage switch must be armed or re-armed. If the Arm/Engage switch is currently Off: - Switch the Arm/Engage switch to the middle position. If the Arm/Engage switch is currently in the middle position: - Switch the Arm/Engage switch to the OFF position, and then back to the middle position.
Ready	The selected valve is currently not active and the ECU is ready for automatic control or manual control commands for that function.

External Joystick Setup

Settings related to external joystick inputs for each function can also be found on this page. Enable external joystick control for each function using the toggle shown below. Once **External Joystick Control** has been enabled, the **COMMAND** ECU will begin using the selected **Joystick Interface** and **Joystick Axis** for manual implement control.

Joystick

☒



External Joystick Control

Selecting the Joystick Interface

Select the appropriate **Joystick Interface** for the Height function, depending on the joystick being used:

- If using an analog voltage based joystick, select "Analog"
- If using a J1939 CANBUS based joystick, select "J1939"

Joystick Interface:

Analog

Analog

J1939

Selecting the Joystick Axis (Analog)

Next, select the appropriate **Joystick Axis**. For the Analog interface, Axis 1 is intended for the joystick Y-axis, Axis 2 is intended for the joystick X-axis and Axis 3 is intended for the joystick Z-axis if present.

Joystick Axis:

Axis 1 Input

Axis 1 Input

Axis 2 Input

Axis 3 Input

Selecting the Joystick Interface (J1939 / CAN)

For the J1939 interface, select the joystick axis to be used for the function, e.g. Y-axis for manual height control.

Joystick Axis:

Y (Forward / Aft)

Y (Forward / Aft)

X (Left / Right)

Z (Twist)

Swapping the Joystick Axis' Control Direction

If moving the joystick in a certain direction causes the wrong physical movement direction, the axis can be inverted using the **Invert Joystick Axis** tick box.

☒ Invert joystick axis

Selecting the Override Behaviour

Lastly, select the desired **Override Behaviour** for the function:

- "Disengage" will cause any joystick movement to disengage automatic control mode, requiring the operator to press the engage button again to resume automatic control.
- "Momentary Disengage" will cause any joystick movement to only momentarily disengage automatic control mode. Once the joystick is no longer being moved, **COMMAND** will resume controlling the implement automatically.

Override Behaviour

Disengage



Disengage

Momentary disengage



Regardless of **Override Behaviour** selection, **COMMAND** will always prioritise joystick/manual control signals over automatic control signals to maintain full operator control of the implement.