



W100/W600/W900/WebMaster One/WIND Controller Relay Interlocks

There are several different types of interlocks that can be programmed into the controller. This document discusses using the Interlock Channel field in the Relay menu, specifically, enabling one relay to interlock another relay.

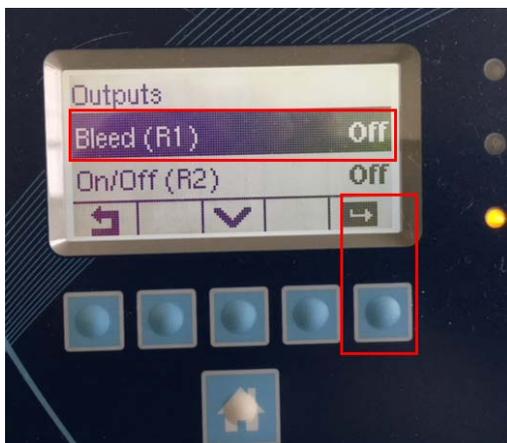
W100 Controller

To navigate to the Relay Interlock menu, please follow the screen shots below.

Go to Outputs.



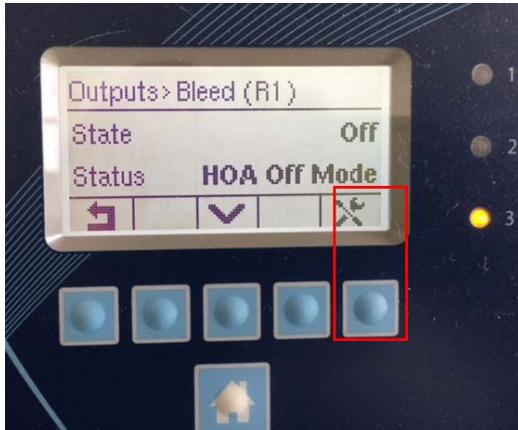
Select the Relay, press the Enter button.



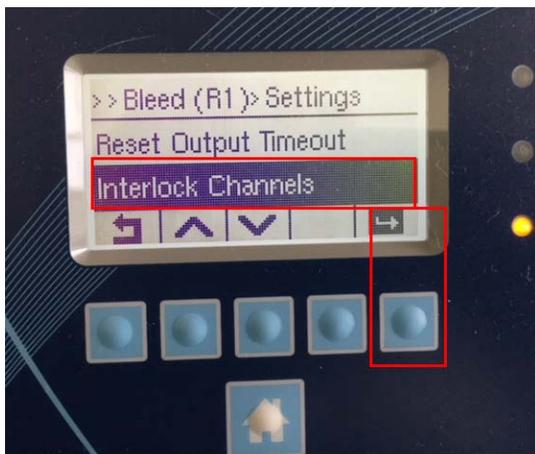


W100 Controller (continued)

Press the Setting button.



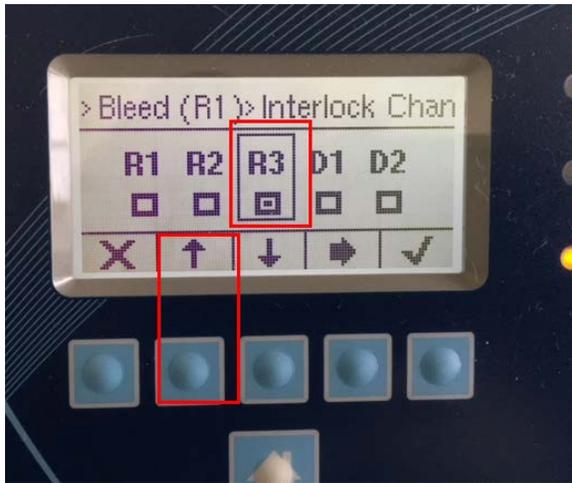
Scroll down and select Interlock Channels, and press the Enter button.





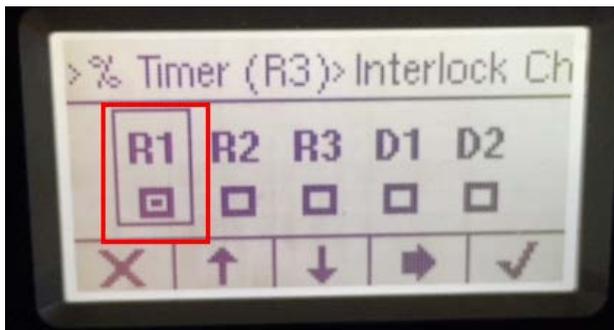
W100 Controller (continued)

You are in the Relay1 menu. Move the cursor to the Relay that is to interlock Relay1, and Press the Up Arrow button to select that Relay. In this case Relay3.



In the above example, you've programmed the R1 relay such that if R3 activates, R1 will be interlocked. If R1 is On when R3 activates, R1 will immediately shut Off. If R1 is Off when R3 activates, R1 will not be able to activate until R3 deactivates. This is referred to as Permissive Interlock.

Now keeping the above programming in R1 menu, let's say you go to Relay3 menu, **Outputs/R3/Settings/Interlock Channels** and press on R1, as shown in the screen shot below.



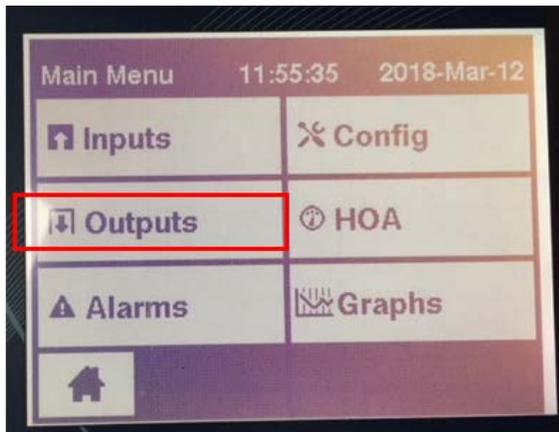
Since the R1 menu has Interlock Channels R3, and the R3 menu has Interlock Channels R1, whichever relay activates first will prevent the other relay from activating. This is referred to as Mutual Interlock.



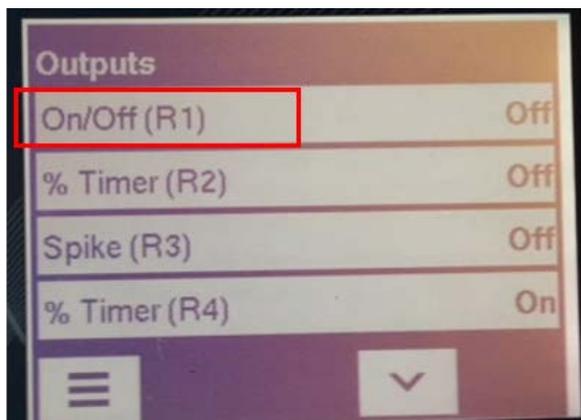
W600/W900 Controllers

To navigate to the Relay Interlock menu, please follow the screen shots below.

Go to Outputs.

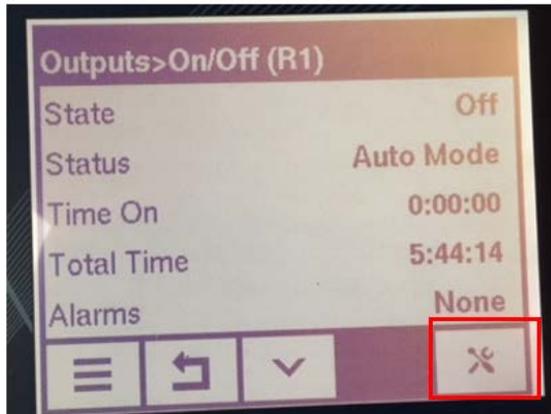


Select the Relay.



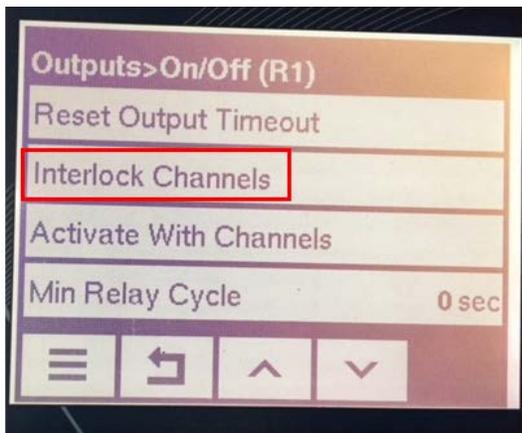


Go to Settings.



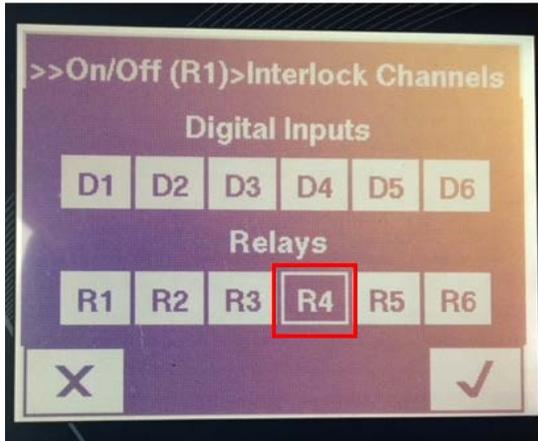
W600/W900 Controllers (continued)

Go to Interlock Channels.





Press on the Interlock Channels field (shown above), and press on R4 (shown below), and you will see this screen:



In this example, you've programmed the R1 relay such that if R4 activates, R1 will be interlocked. If R1 is On when R4 activates, R1 will immediately shut Off. If R1 is Off when R4 activates, R1 will not be able to activate until R4 deactivates. This is referred to as Permissive Interlock.

Now keeping the above programming in R1 menu, let's say you go to Relay4 menu, **Outputs/R4/Settings/Interlock Channels** and press on R1, as shown in the screen shot below.



Since the R1 menu has Interlock Channels R4, and the R4 menu has Interlock Channels R1, whichever relay activates first will prevent the other relay from activating. This is referred to as Mutual Interlock.



WebMaster One Controllers

Connect to the controller with a computer, go into Outputs/Bleed(R1) menu.



In the Bleed(R1) menu, if you check off Mutual Interlocks Feed(R2), then automatically in the Feed(R2) menu, in the Mutual Interlocks Bleed(R1) gets checked off also.



WebMaster One Controllers (continued)

Relay Output #1 Menu

Relay Control Mode	On/Off Setpoint
Relay Input Assignment	cond(S3)
Current Reading	385.72 μ S
Status	Off
Custom Name	Bleed
Set Point	500 (0 to 30000) μ S
Dead Band	50 μ S
Time Period	0 (0 to 1440)Min., 0 to disable
% of Period to Feed	50 (0.1 to 100)%
Control Direction	<input checked="" type="radio"/> Force Lower <input type="radio"/> Force Higher
Mutual Interlocks	<input checked="" type="checkbox"/> Feed(R2) <input type="checkbox"/> Bio1(R3) <input type="checkbox"/> Bio2(R4) <input type="checkbox"/> Not Used(R5) <input type="checkbox"/> Not Used (R6) <input type="checkbox"/> Not Used(R7) <input type="checkbox"/> Alarm(R8)
Output Time Limit	30 (0 to 1440)Min.
Output Mode	<input type="radio"/> Hand <input type="radio"/> Off <input checked="" type="radio"/> Auto
Hand Time Limit	10 (1 to 1440)Min.
Event Log	View Log File

Submit Details

In the Feed(R2) menu, in the Mutual Interlocks, Bleed(R1) automatically gets checked off also.

Relay Output #2 Menu

Relay Control Mode	Flow Based Feed
Assign Makeup Meter 1	ContactFM1(DI_A)
Assign Makeup Meter 2	Please select an input.
Status	Off
Accumulated Volume	N/A gal.
Custom Name	Feed
Unit Vol. to Trigger Output	10 gal.
Output OnTime Per Unit Volume	0 (Min.) 0 (Sec.)(0 to 1440)Min.
Mutual Interlocks	<input checked="" type="checkbox"/> Bleed(R1) <input type="checkbox"/> Bio1(R3) <input type="checkbox"/> Bio2(R4) <input type="checkbox"/> Not Used(R5) <input type="checkbox"/> Not Used (R6) <input type="checkbox"/> Not Used(R7) <input type="checkbox"/> Alarm(R8)
Output Time Limit	0 (0 to 1440)Min.
Output Mode	<input type="radio"/> Hand <input type="radio"/> Off <input checked="" type="radio"/> Auto
Hand Time Limit	10 (1 to 1440)Min.
Event Log	View Log File

Submit Details



WebMaster One Controllers (continued)

Since the Bleed(R1) menu has Mutual Interlocks Feed(R2), and the Feed(R2) menu has Mutual Interlocks Bleed(R1), whichever relay activates first will prevent the other relay from activating. This is referred to as Mutual Interlock. This is the only type of relay to relay interlock the WebMaster One controller can do.

WIND Controller

The WIND controller has the same Mutual Interlock feature as the WebMaster One controller. In addition, the WIND controller has the Permissive Interlocks feature. This Permissive Interlocks feature will now be explained below.

Connect to the controller with a computer, go into Outputs Relay1(R1) menu.





WIND Controller (continued)

In the Relay1(R1) menu, check off Permissive Interlocks Relay2(R2).

Relay Output #1 Menu

Relay Control Mode	On/Off Setpoint
Relay Input Assignment	Cond(S2)
Current Reading	456 μ S
Status	Off
Custom Name	Relay1
Set Point	500 (0 to 30000) μ S
Dead Band	25 μ S
On-Delay	0 (Min.) 0 (Sec.)(10 to 1440)Min. 0 to disable.
Off-Delay	0 (Min.) 0 (Sec.)(10 to 1440)Min. 0 to disable
Control Direction	<input checked="" type="radio"/> Force Lower <input type="radio"/> Force Higher
Mutual Interlocks	<input type="checkbox"/> Relay2(R2) <input type="checkbox"/> pH range control(R3) <input type="checkbox"/> Caustic Feed(R4) <input type="checkbox"/> Alarm 70% tank level(R5) <input type="checkbox"/> Recirc pump on/off(R6) <input type="checkbox"/> Chem pumps OFF(R7)
This Relay and each Output selected will never be on at the same time. First Output on has priority.	
Permissive Interlocks	<input checked="" type="checkbox"/> Relay2(R2) <input type="checkbox"/> pH range control(R3) <input type="checkbox"/> Caustic Feed(R4) <input type="checkbox"/> Alarm 70% tank level(R5) <input type="checkbox"/> Recirc pump on/off(R6) <input type="checkbox"/> Chem pumps OFF(R7)
This Relay will be interlocked by any of the Outputs selected. If any selected Output turns on, this relay will turn off.	
Output Time Limit	0 (0 to 1440)Min.
Output Mode	<input type="radio"/> Hand <input type="radio"/> Off <input checked="" type="radio"/> Auto
Hand Time Limit	15 (1 to 1440)Min.
Event Log	View Log File

In this example, you've programmed the Relay1(R1) such that if Relay2(R2) activates, Relay1(R1) will be interlocked. If Relay1(R1) is On when Relay2(R2) activates, Relay1(R1) will immediately shut Off. If Relay1(R1) is Off when Relay2(R2) activates, Relay1(R1) will not be able to activate until Relay2(R2) deactivates. This is referred to as Permissive Interlock.