

915U-2 Force/Startup mapping

Configure module to ask remote modules for latest I/O values on startup.

The following application note demonstrates how to configure modules with a Force/Startup poll mapping.

Communications of I/O from remote location back to the Base radio is done on a Change of State (COS) bases as well as a regular update period. The default update period in the module is set to 10 minutes, this means that if the inputs are not regularly changing the Base radio may not get the most up to date status until it either receives a change of state or happens to receive one of the update messages.

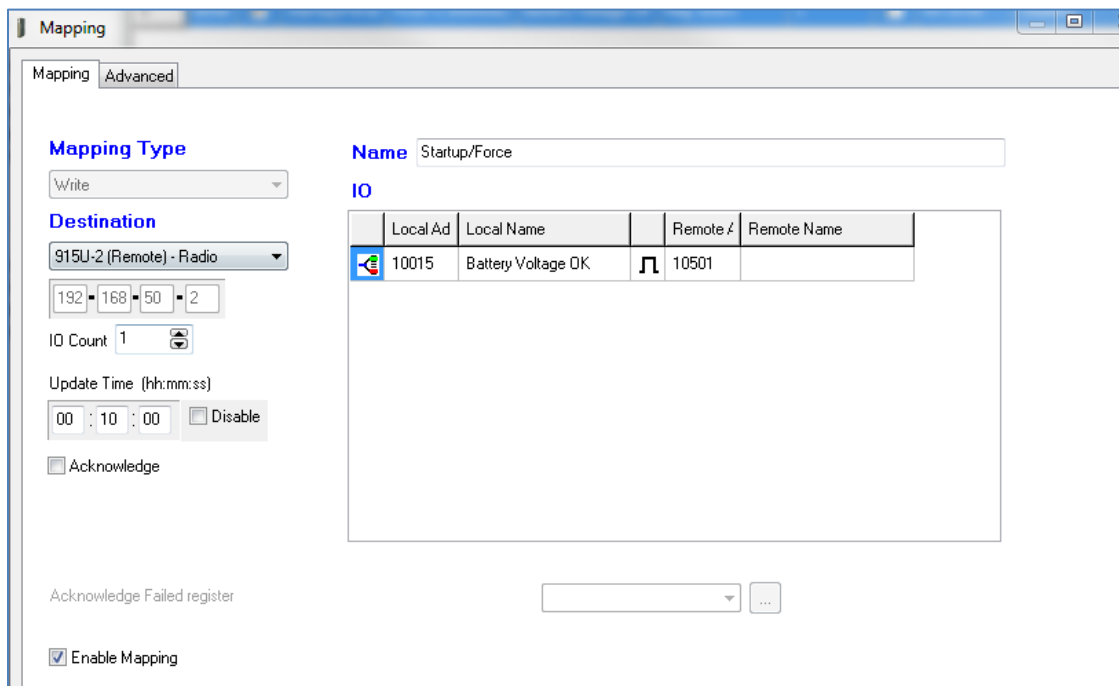
If the Base radio is restarted just after the remote input has updated, it may not get the next status message for another 10 minutes. We can overcome this issue by setting up a “Force/Startup mapping”

To setup the Force/Startup Mapping you first you need to configure a mapping in the Base module to each of the remote modules you wish to get updates from if the module is restarted. If you have multiple remote sites and will need to setup individual mappings to each remote site, you can however use the same input register as the trigger.

You want the input to be either permanently “On” or have the mapping inverted so that the “Off” status will turn the remote output “On”.

In the example below, I have used the Battery Voltage OK Input (Reg 10015) which indicates there is a Battery supply is present which will always be case even if powered by the Supply +&-. You could use a Digital input and hardwire it “on”.

The Battery Voltage Ok input is mapped to a free output on the remote module; in this case I have used the general-purpose register 10501, you could also use any of the 5XX general purpose registers.

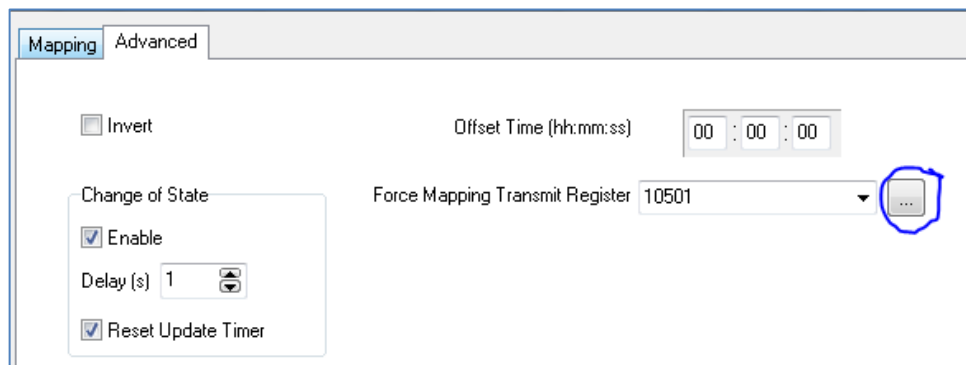


On each of the remote module/s you then configure this register (10501) to trigger any mappings that are sent back to the Base radio.

You can see in the Screenshot below the mapping on the Remote radio is going back to the Base Radio (915U-2 Gateway) and it has the Force Reg configured to use register 10501. Set the same force register if you have multiple mappings configured to go back to the Base Radio.

<input type="button" value="Add"/> <input type="button" value="Move Up"/>		<input type="button" value="Edit"/> <input type="button" value="Move Down"/>		Tx Ack Count: 3								
<input type="button" value="Delete"/>				Tx Ack Timeout: 2000								
				Tx Un Ack Count: 1								
#	Type	Enabled	Name	Destination	First Local Reg	First Remote Reg	Reg Count	Inv	Update Time	Update Offset	Force Reg	Fail Reg
1	Write	<input checked="" type="checkbox"/>		915U-2 (Gateway)	DI1	DO2	7	<input checked="" type="checkbox"/>	00:10:00	Disabled	10501	Disabled

Selection is done on the Advanced Tab of the mapping (as seen below) and you can manually enter the register number in the “Force Mapping Transmit Register” text box or select the appropriate location using the I/O selector button (...)



The screenshot shows the 'Mapping Advanced' configuration window. It includes an 'Invert' checkbox, an 'Offset Time (hh:mm:ss)' field set to '00:00:00', and a 'Change of State' section with 'Enable', 'Delay (s)' (set to 1), and 'Reset Update Timer' checkboxes. The 'Force Mapping Transmit Register' is a dropdown menu currently showing '10501', with a selection button (three dots) circled in blue.

When configured, reprogram all modules and then when the Base radio is restarted it will send the initial mapping to each of the remotes which in turn will trigger each remote to send an update with all of the current I/O statuses back to the Base Radio.

So soon after the Base Radio has restarted it should receive the latest updates status from at each remote for any mappings configured.