

# DivisibleRoom\_DisplayRT\_Watcher\_and\_Corrector\_ACSDi\_v01.umc

This module watches analog inputs (commonly fed from the feedback of a matrix) that have been assigned to a room against the current room configuration. If an analog is found to be using an input that is NOT assigned to a room that is part of the current room state configuration it is then set to a default value.

## Example:

- Room A
  - Inputs 1-9 are assigned to Room A
  - Outputs 1-9 are assigned to Room A
    - Defaults of 3
- Room B
  - Inputs 11-19 are assigned to Room B
  - Outputs 11-19 are assigned to Room B
    - Defaults of 14

If the room state is combined (e.g. [Room\_ABs\_Wall\_Is\_Open\_(Combined)] is HIGH) then all noted inputs (both rooms) maybe be routed to all noted outputs (both rooms).

Current state:

- Output 4 has Input 5
- Output 6 has Input 17
- Output 12 has Input 13
- Output 15 has Input 2

If the rooms are separated ([Room\_ABs\_Wall\_Is\_Open\_(Combined)] is LOW) then the State will change to:

- Output 4 has Input 5
- Output 6 has Input 3
- Output 12 has Input 13
- Output 15 has Input 14

Output 6 (Room A) was showing Input 17 (Room B) since the rooms are separated this is no longer a valid route and was set to the default (3).

Output 15 (Room B) was showing Input 2 (Room A) since the rooms are separated this is no longer a valid route and was set to the default (14).

All other routes are still valid and are left alone.

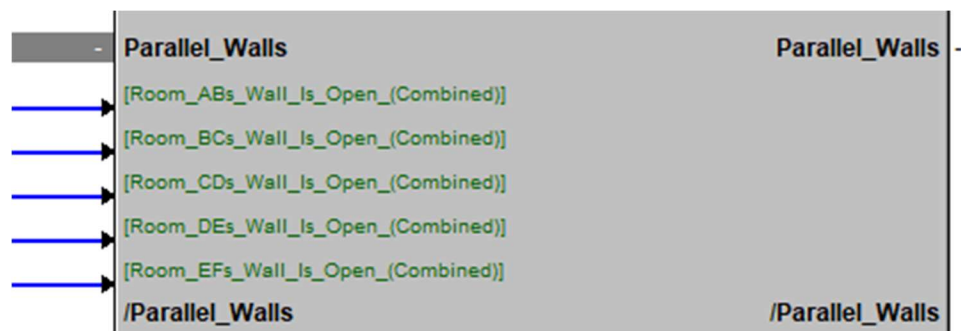
If a new invalid route is created the default is immediately applied without any wall state changing.

# Walls



Either use the inputs from group Parallel\_Walls OR Perpendicular\_Walls; **DO NOT USE BOTH**. Using both can result in errors. Both groups have the exact same outcome. Optional Perpendicular\_Walls feedback is provided for your convenience when using either Parallel or Perpendicular signal inputs.

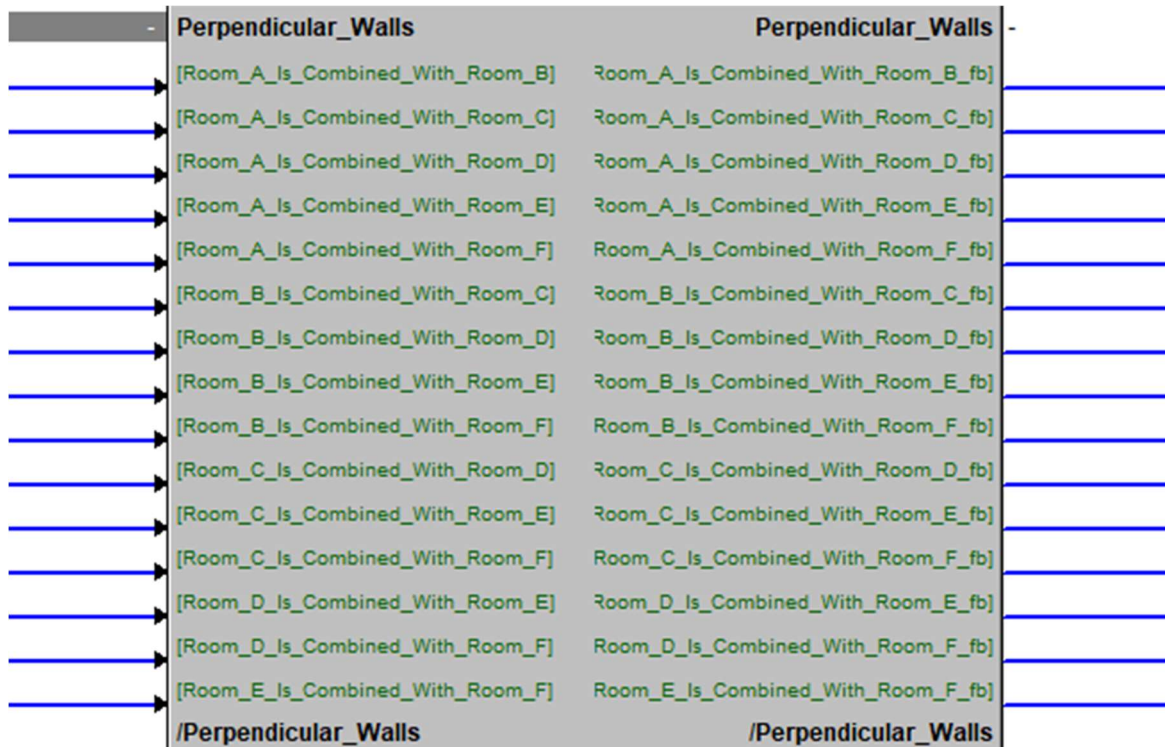
## Parallel\_Walls



The Parallel\_Walls group can be used for 2-6 rooms all in a row (A|B|C|D|E|F) where each room is connected to the lettered room(s) next to it alphabetically.

[Room_ABs_Wall_Is_Open_(Combined)]	Hold HIGH when the AB airwall is in storage
[Room_BCs_Wall_Is_Open_(Combined)]	Hold HIGH when the BC airwall is in storage
[Room_CDs_Wall_Is_Open_(Combined)]	Hold HIGH when the CD airwall is in storage
[Room_DEs_Wall_Is_Open_(Combined)]	Hold HIGH when the DE airwall is in storage
[Room_EFs_Wall_Is_Open_(Combined)]	Hold HIGH when the EF airwall is in storage

## Perpendicular\_Walls



The Perpendicular\_Walls group can be used for any layout of 2-6 rooms. Hold HIGH any input(s) that are applicable. Outputs give both Parallel\_Walls feedback and Perpendicular\_Walls feedback.

Inputs	
[Room_A_Is_Combined_With_Room_B] [Room_A_Is_Combined_With_Room_C] [Room_A_Is_Combined_With_Room_D] [Room_A_Is_Combined_With_Room_E] [Room_A_Is_Combined_With_Room_F]	Hold HIGH when Room A is combined with "X".
[Room_B_Is_Combined_With_Room_C] [Room_B_Is_Combined_With_Room_D] [Room_B_Is_Combined_With_Room_E] [Room_B_Is_Combined_With_Room_F]	Hold HIGH when Room B is combined with "X".
[Room_C_Is_Combined_With_Room_D] [Room_C_Is_Combined_With_Room_E] [Room_C_Is_Combined_With_Room_F]	Hold HIGH when Room C is combined with "X".
[Room_D_Is_Combined_With_Room_E] [Room_D_Is_Combined_With_Room_F]	Hold HIGH when Room D is combined with "X".
[Room_E_Is_Combined_With_Room_F]	Hold HIGH when Room E is combined with F.

Outputs	
[Room_A_Is_Combined_With_Room_B_fb] [Room_A_Is_Combined_With_Room_C_fb] [Room_A_Is_Combined_With_Room_D_fb] [Room_A_Is_Combined_With_Room_E_fb] [Room_A_Is_Combined_With_Room_F_fb]	Held HIGH when Room A is combined with "X".

[Room_B_Is_Combined_With_Room_C_fb]	Held HIGH when Room B is combined with "X".
[Room_B_Is_Combined_With_Room_D_fb]	
[Room_B_Is_Combined_With_Room_E_fb]	
[Room_B_Is_Combined_With_Room_F_fb]	
[Room_C_Is_Combined_With_Room_D_fb]	Held HIGH when Room C is combined with "X".
[Room_C_Is_Combined_With_Room_E_fb]	
[Room_C_Is_Combined_With_Room_F_fb]	
[Room_D_Is_Combined_With_Room_E_fb]	Held HIGH when Room D is combined with "X".
[Room_D_Is_Combined_With_Room_F_fb]	
[Room_E_Is_Combined_With_Room_F_fb]	Held HIGH when Room E is combined with F.

Protip: Use Perpendicular\_Walls feedback to drive button/subpage joins on your touch panel enabling / visibility joins of objects that are only available when those rooms are combined. This is extra helpful if you are using the Parallel\_Walls Inputs as it translates parallel walls to perpendicular walls via a built in truth table.

## Outputs



This group watches and sets your Matrix. It can be used for any type of matrix (HD-MD, NVX, DMPS, ect.) that provides true or fake feedback. If your Matrix is FAKE feedback put your analog route on BOTH the Input and corresponding Output side.

Inputs	
[RT_X_fb]	Output feedback from your matrix to be watched.

Outputs	
[RT_X]	Matrix routes to be set when invalid routes are found.

Protip: Copy/Paste all your matrix Inputs and Outputs just as they are keeping the same numbers and even including all zero routes and comments.

Example:

	-	Outputs	Outputs	-
RT_RMA_VTC_CAMERA_fb	→	[RT_1_fb]	[RT_1]	RT_RMA_VTC_CAMERA →
//RT_RMA_VTC_CAMERA2_fb	→	[RT_2_fb]	[RT_2]	0 →
RT_RMA_VTC_CONTENT_fb	→	[RT_3_fb]	[RT_3]	RT_RMA_VTC_CONTENT →
RT_RMB_VTC_CAMERA_fb	→	[RT_4_fb]	[RT_4]	RT_RMB_VTC_CAMERA →
//RT_RMB_VTC_CAMERA2_fb	→	[RT_5_fb]	[RT_5]	0 →
RT_RMB_VTC_CONTENT_fb	→	[RT_6_fb]	[RT_6]	RT_RMB_VTC_CONTENT →
RT_RMC_VTC_CAMERA_fb	→	[RT_7_fb]	[RT_7]	RT_RMC_VTC_CAMERA →
//RT_RMC_VTC_CAMERA2_fb	→	[RT_8_fb]	[RT_8]	0 →
RT_RMC_VTC_CONTENT_fb	→	[RT_9_fb]	[RT_9]	RT_RMC_VTC_CONTENT →
	→	[RT_10_fb]	[RT_10]	//Unused →
RT_RMA_DISPLAY_1_fb	→	[RT_11_fb]	[RT_11]	RT_RMA_DISPLAY_1 →
RT_RMA_DISPLAY_2_fb	→	[RT_12_fb]	[RT_12]	RT_RMA_DISPLAY_2 →
RT_RMB_DISPLAY_4_fb	→	[RT_13_fb]	[RT_13]	RT_RMB_DISPLAY_4 →
RT_RMB_DISPLAY_5_fb	→	[RT_14_fb]	[RT_14]	RT_RMB_DISPLAY_5 →
RT_RMC_DISPLAY_6_fb	→	[RT_15_fb]	[RT_15]	RT_RMC_DISPLAY_6 →
RT_RMC_DISPLAY_7_fb	→	[RT_16_fb]	[RT_16]	RT_RMC_DISPLAY_7 →
RT_RMA_DISPLAY_3_fb	→	[RT_17_fb]	[RT_17]	RT_RMA_DISPLAY_3 →
	→	[RT_18_fb]	[RT_18]	//Unused →
	→	[RT_19_fb]	[RT_19]	
	→	[RT_20_fb]	[RT_20]	

# Source\_Select

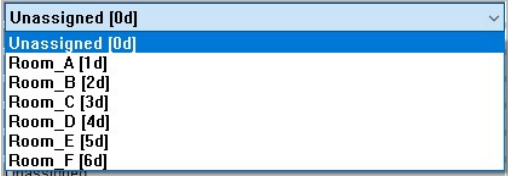


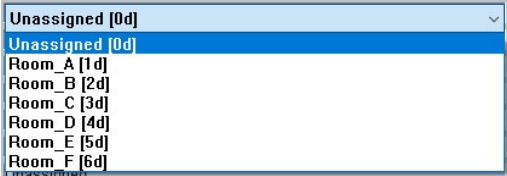
This group functions much the same as the Outputs group except the analog gets both watched and set on the input (left) side of the module. This is useful for non-matrix analogs that may hold invalid input numbers based on room state (like source feedback in source/destination routing).

Inputs	
[Room_X_Source_Select]	Analog to be watched and set if invalid based on room configuration. Note: These analogs are already assigned a room state and do NOT have a corresponding parameter.

## Parameters

Combined_Status_Change_Debounce	10s
RT_1_Room_Assignment	Unassigned
RT_2_Room_Assignment	Unassigned
RT_3_Room_Assignment	Unassigned
RT_4_Room_Assignment	Unassigned
RT_63_Room_Assignment	Unassigned
RT_64_Room_Assignment	Unassigned
RT_1_Default_Route	0d
RT_2_Default_Route	0d
RT_3_Default_Route	0d
RT_4_Default_Route	0d
RT_63_Default_Route	0d
RT_64_Default_Route	0d
Room_A_Source_Select_Default_Route	0d
Room_B_Source_Select_Default_Route	0d
Room_C_Source_Select_Default_Route	0d
Room_D_Source_Select_Default_Route	0d
Room_E_Source_Select_Default_Route	0d
Room_F_Source_Select_Default_Route	0d
Input_1_Room_Assignment	Unassigned
Input_2_Room_Assignment	Unassigned
Input_3_Room_Assignment	Unassigned
Input_4_Room_Assignment	Unassigned

Combined_Status_Change_Debounce	<p>Sets the amount of time between wall signal changes and:</p> <ul style="list-style-type: none"> <li>the beginning of evaluation of invalid routes</li> <li>the feedback change of [Room_Y_Is_Combined_With_Room_X_fb]</li> </ul> <p>(Range 0.1s – 60.0s)</p>
RT_X_Room_Assignment	<p>Assigns an Output (e.g. [RT_X_fb] &amp; [RT_X]) to a particular room. Leave as Unassigned if you do not wish the output to be watched/set.</p>  <p>(Range 0-6)</p>
RT_X_Default_Route	<p>Corresponding [RT_X] will be set to this default on detection of invalid routes.</p> <p>(Range 0-64)</p>
Room_X_Source_Select_Default_Route	<p>Corresponding [Room_X_Source_Select] will be set to this default on detection of invalid routes.</p> <p>(Range 0-64)</p>

Input_X_Room_Assignment	<p>Assigns a particular room to an analog value to be watched for. Leave unassigned if all rooms can use the input.</p>  <p>(Range 0-6)</p>
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#### Versions:

00a-e: development

00f: Real word test

- Tested by Nate in an A|B room; thanks Nate

01: Release

- Added help file.

02: Bug Fix

- Some combinations parallel walls of more than 2 rooms would cause the room combination not to update.

Programmed by Guy Gades at ACSDi 2020.