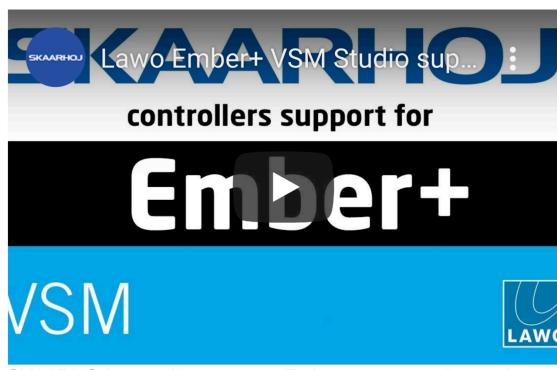


Device: Lawo Ember+ VSM Studio Support



Introduction

SKAARHOJ controllers support Ember+ access to internal registers so you can integrate and manage your controllers from VSM Studio or another Ember+ consumer. For inspiration see the videos below for a demonstration. Please notice our integration is as a Ember+ Provider, which may be unusual in a sense for a control panel. We have no ETA for Ember+ Consumer functionality.



Lawo Ember+ VSM Studio support in SKAARHOJ GPI controllers, part I

<https://youtu.be/UCkwHoNrA4I>



RCP management with VSM Studio and Ember+, part II

<https://youtu.be/2MU0hW742iw>

Getting Started

SKAARHOJ Controller

On the SKAARHOJ Controller add the "Ember+ Provider" Device Core. Remember to activate the Device Core but do not put any IP strings for the Device Core.

The screenshot shows the SKAARHOJ Configuration interface for a device with S/N #434668. The interface is divided into several sections:

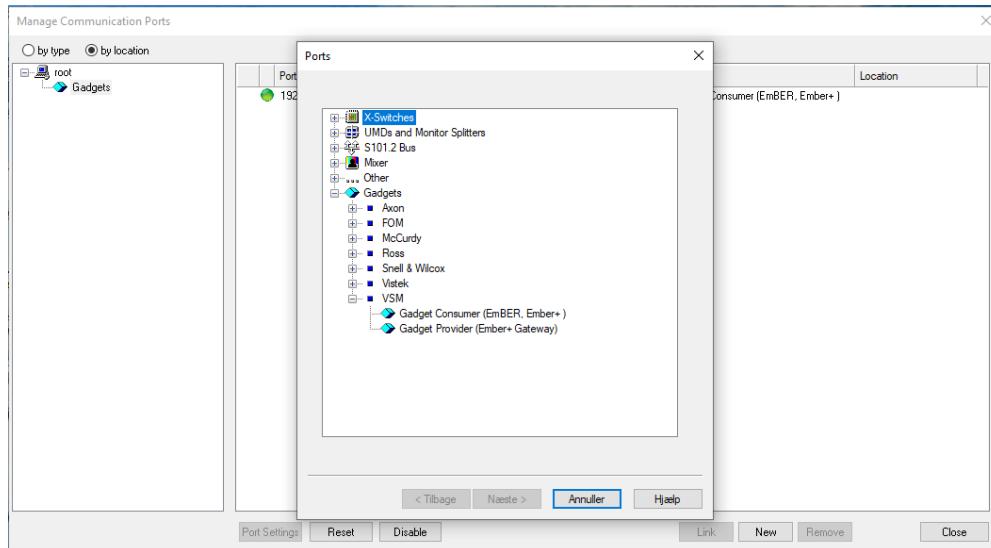
- Configuration:** A list of available configurations:
 - SW-P-08 Test (radio button)
 - Ember+ (radio button, selected, labeled "Active")
 - Raw Panel - Server Mode (radio button)
 - Raw Panel (radio button)
- Installed Devices:** A list of installed devices with icons:
 - GV SW-P-08
 - Lawo Remote Control
 - SKAARHOJ RAW
 - SKAARHOJ RAW
- Advanced:** A red button in the top right corner.
- Network configuration:** Settings for IP, Subnet, Gateway, and DNS:
 - IP: 192.168.10.98
 - Subnet: 255.255.255.0
 - Gateway: 192.168.10.1
 - DNS: 192.168.10.1
- Devices:** A table of installed devices:

Enabled	Name	IP
<input checked="" type="checkbox"/>	EMBER+ Provider	<input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/>

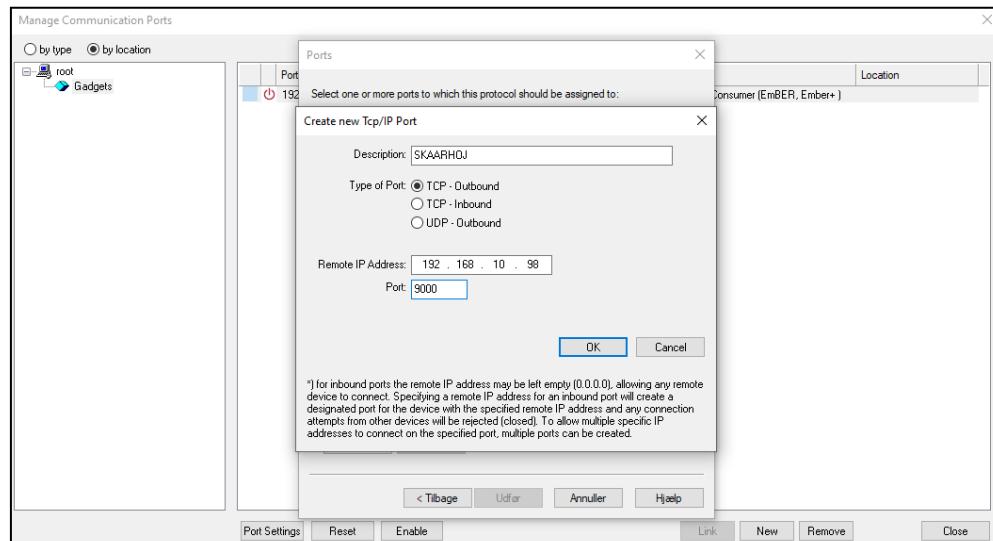
A green "Save Network Configuration" button is at the bottom.

VSM Studio

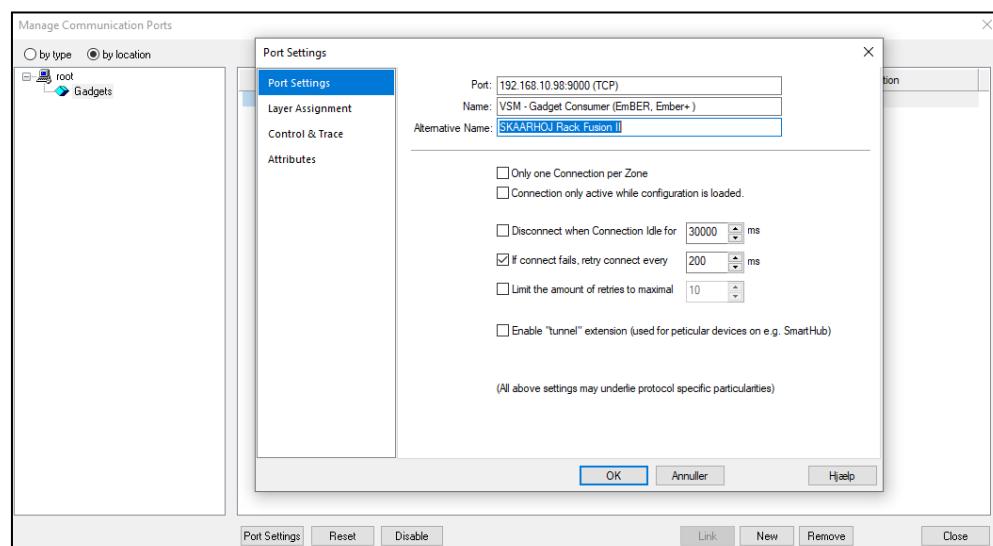
Go to Communication Setup and add: Gadget - VSM - Gadget Consumer (EmBER, Ember+)



Add a New Port (the IP of the SKAARHOJ controller and port: 9000)

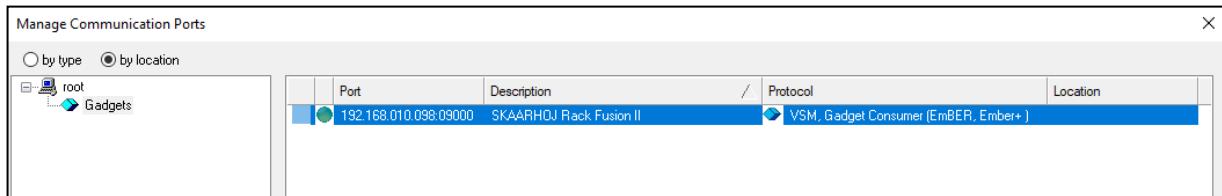


Default Port settings are used



SKAARHOJ DEVICE CORES

When VSM connects to the SKAARHOJ Controller the Green Link connection indicator will come on



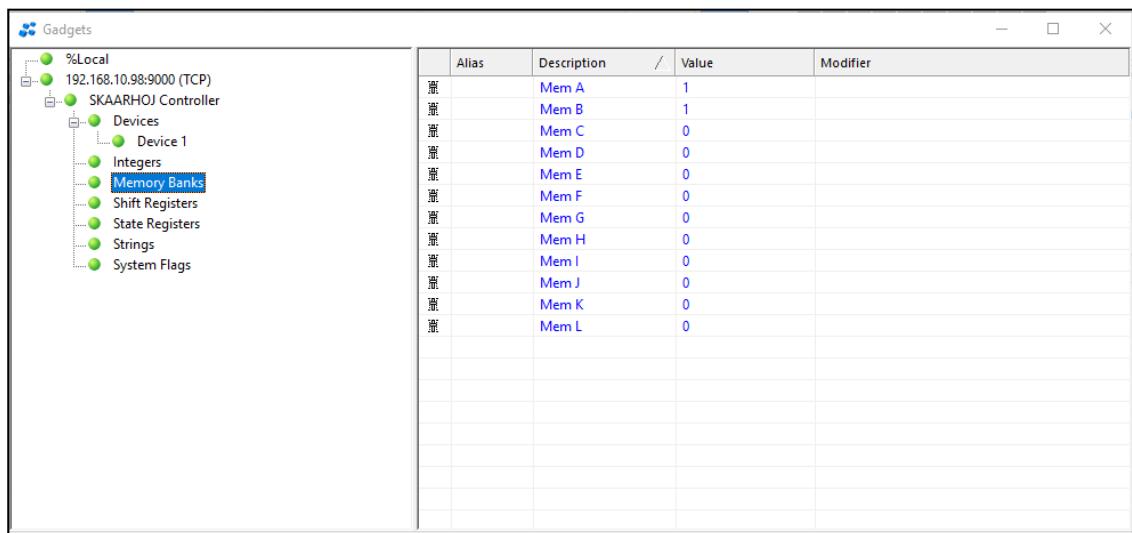
If no project is open, the connection indicator will often light yellow. Any interaction with the SKAARHOJ controller (such as pressing a button, will typically turn the connection status to green)



Now Open the Gadget tree



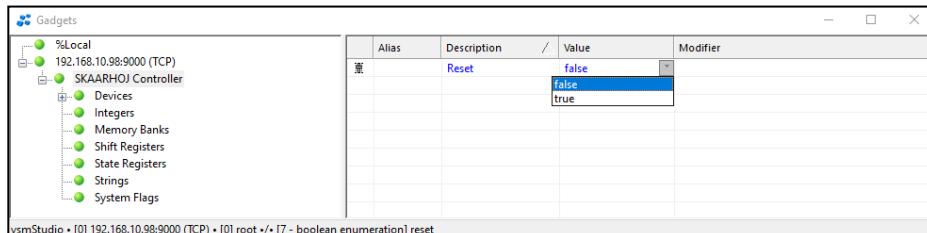
The SKAARHOJ controller will appear where you can access the various registers



Register Possibilities

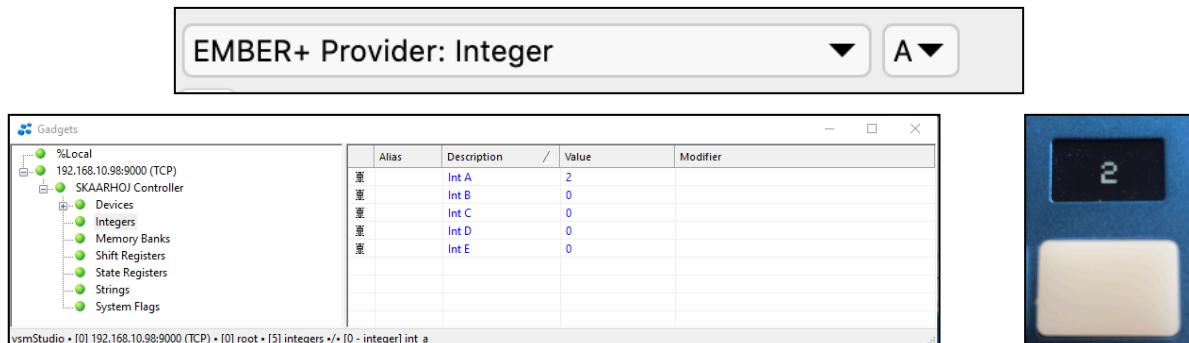
Reset

The SKAARHOJ controller can be reset by setting the value to true.



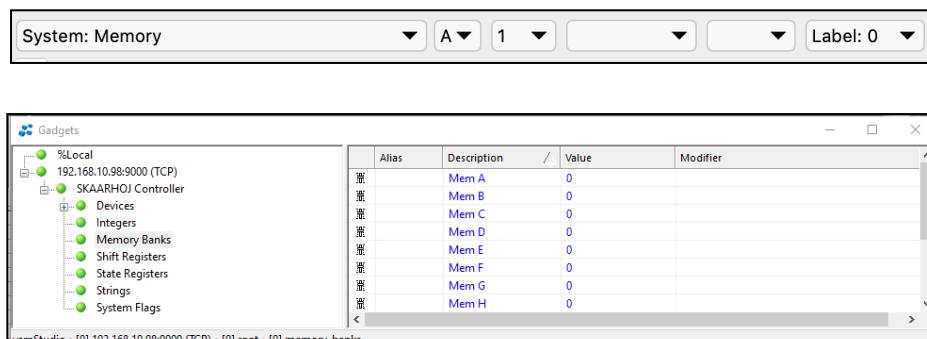
Integers

If assigning the action "Ember+ Provider: Integer" to a button or a display on a SKAAHROJ controller the value put into VSM will be displayed on the SKAARHOJ controller



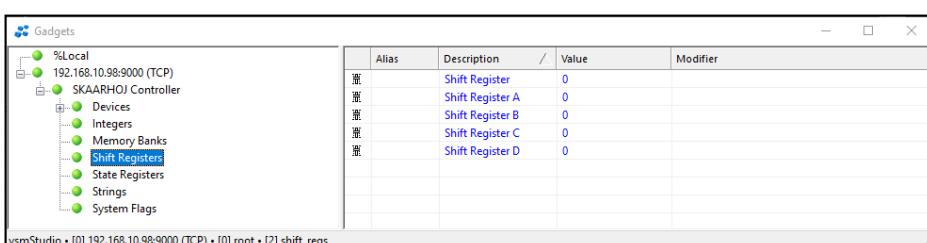
Memory Banks

The SKAARHOJ system action "System: Memory" can be manipulated via VSM



Shift Registers

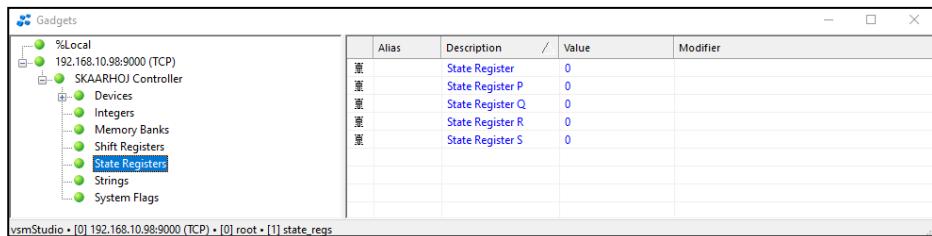
The general shift level and the local shift registers on a SKAARHOJ controller can be controlled from VSM



SKAARHOJ DEVICE CORES

State Registers

The general state level and the local stage registers on a SKAARHOJ controller can be controlled from VSM



Strings

If assigning the action "Ember+ Provider: String" to a button or a display on a SKAAHROJ controller the value put into VSM will be displayed on the SKAARHOJ controller

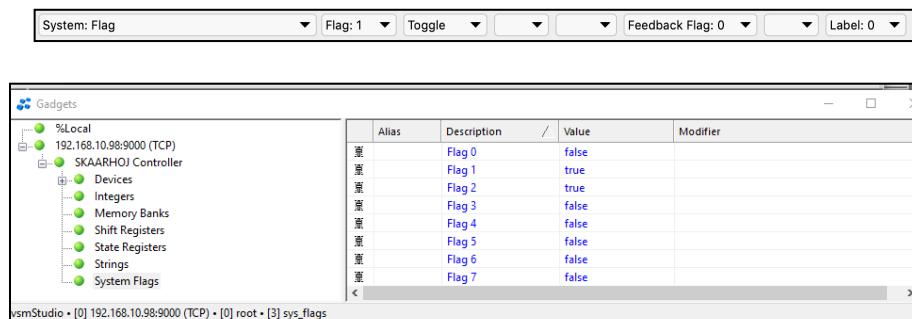
A screenshot of the VSM Studio interface. At the top is a search bar labeled "EMBER+ Provider: String" and an "Index: 0" dropdown. Below is a table with columns: Alias, Description, /, Value, and Modifier. The table contains five rows for String 0 through 4, with values "DisplayText", "Hello", "Preview", "Program", and "Record" respectively. To the right is a blue rectangular component labeled "DisplayText" with a yellow rectangular area below it.

Alias	Description	/	Value	Modifier
	String 0		DisplayText	
	String 1		Hello	
	String 2		Preview	
	String 3		Program	
	String 4		Record	

vsmStudio • [0] 192.168.10.98:9000 (TCP) • [0] root • [4] strings • [4 - string] string_4

System Flags

The SKAARHOJ system action "System: Flags" can be manipulated via VSM



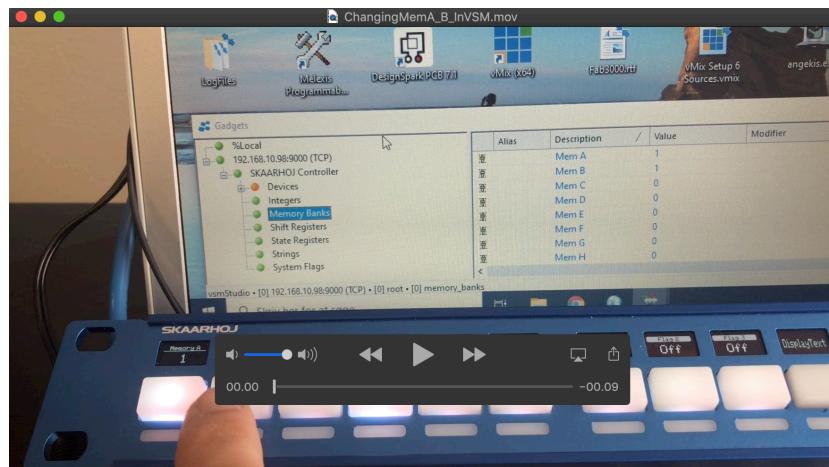
Examples:

Simple memory parameter control

Changing memory parameters in VSM from SKAARHOJ controllers. Example of assigning Mem A 1-3 and Mem B 1-3 on buttons:



Video demonstration: https://github.com/SKAARHOJ/Support/raw/master/Manuals/Videos/Ember%2B/ChangingMemA_B_InVSM.mov

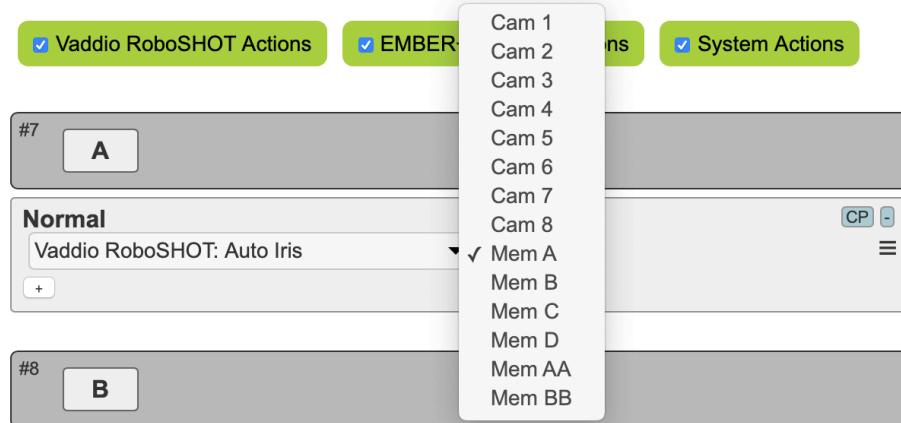


Selecting Camera on a SKAARHOJ controller via VSM

Camera selection on a SKAARHOJ controller can typically be done by changing the memory parameter. In this example we change the memory parameter A to A=1 and A=2 via VSM. It is important to remember the camera actions on the SKAARHOJ controller should be assigned to Mem A and not Mem AA.

Example of a camera action on the SKAARHOJ controller:

Devicecore actions can be hidden from the select lists as well to make configuration faster. (Not recommended)



When set to "Mem A" then:

Mem A = 1 equals Cam 1

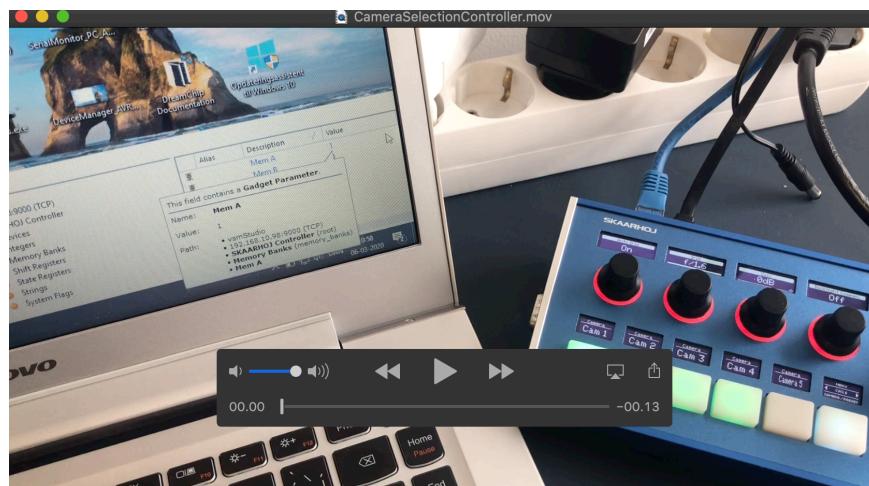
Mem A= 2 equals Cam 2

And so forth

The screenshot shows the VSM software's 'Gadgets' view. On the left is a tree view of the device structure: %Local, 192.168.10.98:9000 (TCP), SKAARHOJ Controller, Devices, Integers, Memory Banks, and Shift Registers. On the right is a table for memory bank 'Mem A' with columns: Alias, Description, /, and Value. The table rows are: Mem A (Value 0), Mem B (Value 0), Mem C (Value 0), Mem D (Value 0), and Mem E (Value 0). The 'Value' column for Mem A is highlighted with a red border.

Alias	Description	/	Value
Mem A		/	0
Mem B		/	0
Mem C		/	0
Mem D		/	0
Mem E		/	0

Video demonstration: [https://github.com/SKAARHOJ/Support/raw/master/Manuals/Videos/Ember%2B/ CameraSelectionController.mov](https://github.com/SKAARHOJ/Support/raw/master/Manuals/Videos/Ember%2B/	CameraSelectionController.mov)



Controlling the SKAARHOJ Tally Box via VSM Studio via System Flags

Controlling the SKAARHOJ Tally box can be done by using the system Flags which can be set to true or false.

Example below for the SKAARHOJ controller.

Feedback Flag 1 = PGM on output 1

Feedback Flag 2 = PRV on output 1

Feedback Flag 3 = PGM on output 2

Feedback Flag 4 = PRV on output 2

The screenshot shows the VSM Studio software interface for configuring the SKAARHOJ Tally System. At the top, there are buttons for "Ember+ Test" (blue) and "Simple Config" (red). Below the header, the "Lawo Ember+ Provider" logo is visible, along with an "Add devices" button. The main area features a large blue rectangle labeled "SKAARHOJ TALLY SYSTEM". Inside this area, there is a grid of 16 numbered buttons (2 to 16) arranged in two columns of eight. The first column contains PRV buttons (2, 4, 6, 8, 10, 12, 14, 16), and the second column contains PGM buttons (1, 3, 5, 7, 9, 11, 13, 15). A "Size:" slider is located above the grid. At the bottom of the main configuration area, there is a "Open All Configuration" checkbox. Below this, a note states: "Devicecore actions can be hidden from the select lists as well to make configuration faster. (Note: This does not work in Safari)". There are also two checkboxes: "EMBER+ Provider Actions" and "System Actions". The bottom half of the screen displays a detailed configuration panel for four specific outputs. Each output row has a number (1, 2, 3, 4) and a label (PGM 1, PRV 1, PGM 2, PRV 2) at the top. Each row contains a "System: Flag" dropdown menu. In the second row (PRV 1), the "Feedback Flag" dropdown is highlighted with a red box. In the fourth row (PRV 2), the "Feedback Flag" dropdown is also highlighted with a red box. The configuration panel includes various dropdown menus for "Flag: 0", "Set", "Label: 0", and "CP" buttons.

SKAARHOJ DEVICE CORES

Video demonstration: <https://github.com/SKAARHOJ/Support/raw/master/Manuals/Videos/Ember%2B/TallyBoxViaSystemFlags.mov>

