

CONFIGURATION

In the GPIO (General Purpose Input Output) Page you can configure all GPIO channels that are available in the Soundcraft Vi Series™. To access the GPIO page, press the [MENU] key, this opens the Main menu page on the master section screen, then touch the <GPIO> tab (see also chapter 14).



Figure 16-1: GPIO Page.

The scrollable tables show the configuration of the GPIO channels. The configuration is done via the VST fields. The selections made via the VST keys and encoders are reflected in the tables on the screen. For each GPIO channel, the polarity, time (outputs only) and edge can be configured, to make it easy to interface directly to different device types.

Screen Touch-Pads

<LOCAL RACK>

Selects the GPIO in the Local Rack (16 GPIO channels).

<STAGE BOX>

Selects the GPIO in the Stage Box (8 GPIO).

Up and Down Arrows

The pair of Up and Down Arrows are used to scroll through the two lists. The currently-selected input and output channels are outlined in yellow. GP Inputs are displayed in blue, and GP Outputs are displayed in red.

GPI VST Keys & Encoders

GPI Field

The {ON} key enables the selected GPI function. GPIO Inputs are via opto-isolators.

Function Field

This field displays the Input function. Its encoder selects the function.

Parameter Field

This field displays the Parameter (e.g. Channel number). There is no parameter for TB INPUT. The encoder adjusts the Parameter.

Polarity Field

This field displays the Polarity of the input. The encoder changes the polarity between positive (+) and negative (-). This field is only available if the {EDGE} field is set to BOTH.

Edge Field

This field displays the triggered Edge. The encoder adjusts the triggered edge between rising/falling/both.

GPO VST Keys & Encoders

GPO Field

The {ON} key enables the GPO function. GPIO Outputs are via pairs of relay contacts.

Function Field

This field displays the Output function. Its encoder selects the function.

Parameter Field

This field displays the Parameter (e.g. Channel number). There is no parameter for TB OUT. The encoder adjusts the Parameter.

Polarity Field

This field displays the Polarity of the Output. The encoder changes the polarity between positive (+) and negative (-). This field is only available if the {EDGE} field is set to BOTH.

Time Field

This field displays the relay pulse time. The relay contacts will revert to their original position at the end of the pulse time. The encoder adjusts the pulse length in ms (a blank field means no pulse is generated, i.e. the relay contacts stay in their new position).

It is suggested that a pulse time is set only when the EDGE field (see below) is set to 'RISING' or 'FALLING'. It is also suggested that no pulse time is set when the EDGE field is set to 'BOTH'. See Figure 16-3 for a timing diagram of relay operation using fader start.

Edge Field

This field displays the triggered Edge. The encoder adjust the triggered Edge between rising/falling/both.

	FUNCTION	PARAMETER	POLARITY	TIME	EDGE
INPUTS	CH MUTE	1-64 (channel)	POSITIVE NEGATIVE		BOTH RISING FALLING
	F KEY LED	1-6 (f key)	POSITIVE NEGATIVE		BOTH RISING FALLING
	TB INPUT		POSITIVE NEGATIVE		BOTH RISING FALLING
	DIM MON	A or B (monitor)	POSITIVE NEGATIVE		BOTH RISING FALLING
OUTPUTS	FDR START	1-64 (channel)	POSITIVE NEGATIVE	0-500mS 0-500mS 0-500mS 0-500mS	BOTH RISING FALLING
	F KEY	1-6 (f key)	POSITIVE NEGATIVE	0-500mS 0-500mS 0-500mS 0-500mS	BOTH RISING FALLING
	TB OUT		POSITIVE NEGATIVE	0-500mS 0-500mS 0-500mS 0-500mS	BOTH RISING FALLING

Figure 16-2: Summary Of Available Settings.

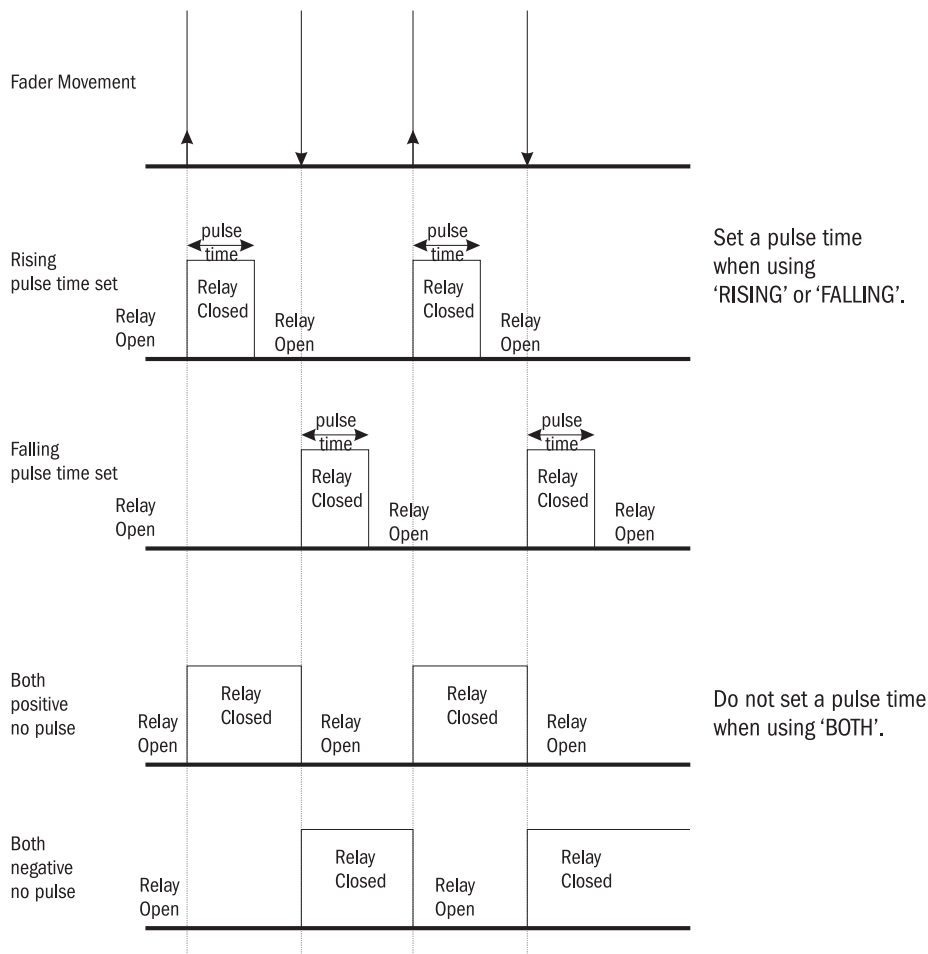


Figure 16-3: Relay timing diagram.

HARDWARE

Schematic Diagram

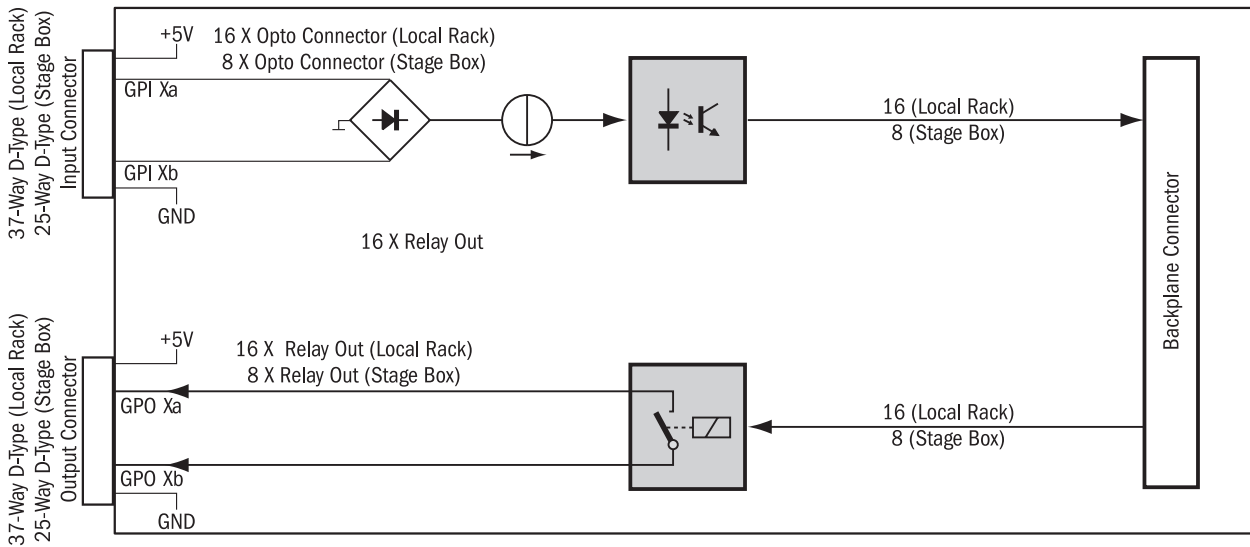


Figure 16-4: Schematic Diagram.

For general-purpose applications requiring total electrical isolation, the GPIO card provides electrically-isolated opto-coupler inputs with integrated current sink (5 to 24 VDC) and electrically isolated outputs using SPST relay contacts.

5 VDC and Gnd supply pins are provided.

Inputs and outputs are on standard D-type connectors (female).

Inputs

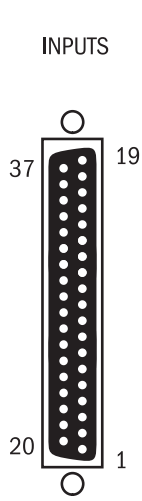
Control inputs (GPI Xa/b) are completely independent and electrically isolated. They may be used either with the internal +5 VDC supply voltage, or with external voltages of 5 to 24 VDC, regardless of the polarity. Total current supplied by all +5 VDC pins of one card must not exceed 600 mA.

Outputs

Control outputs (GPO Xa/b) are completely independent, electrically-isolated relay contacts, closed if active. Contact rating is 0.5 A for 125 VAC, 1 A for 30 VDC, or 0.3 A for 110 VDC. The +5 VDC supply voltage or the ground (GND) terminals, together with the relay contacts, may be used to generate an output signal. Total current supplied by all +5 VDC pins of one card must not exceed 600 mA.

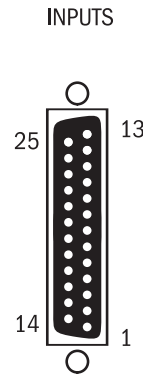
Pin Lists

LOCAL RACK

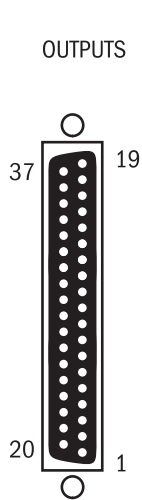


Pin	Signal	Pin	Signal
		19	GND (0V)
37	VCC (+5V)	18	GND (0V)
36	VCC (+5V)	17	GND (0V)
35	GPI 16b	16	GPI 16a
34	GPI 15b	15	GPI 15a
33	GPI 14b	14	GPI 14a
32	GPI 13b	13	GPI 13a
31	GPI 12b	12	GPI 12a
30	GPI 11b	11	GPI 11a
29	GPI 10b	10	GPI 10a
28	GPI 9b	9	GPI 9a
27	GPI 8b	8	GPI 8a
26	GPI 7b	7	GPI 7a
25	GPI 6b	6	GPI 6a
24	GPI 5b	5	GPI 5a
23	GPI 4b	4	GPI 4a
22	GPI 3b	3	GPI 3a
21	GPI 2b	2	GPI 2a
20	GPI 1b	1	GPI 1a

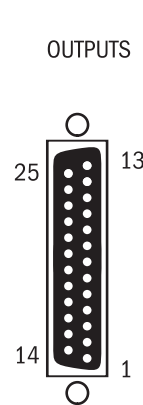
STAGE BOX



Pin	Signal	Pin	Signal
		13	GND (0V)
25	VCC (+5V)	12	GND (0V)
24	VCC (+5V)	11	GND (0V)
23	VCC (+5V)	10	GND (0V)
22	VCC (+5V)	9	GND (0V)
21	GPI 8b	8	GPI 8a
20	GPI 7b	7	GPI 7a
19	GPI 6b	6	GPI 6a
18	GPI 5b	5	GPI 5a
17	GPI 4b	4	GPI 4a
16	GPI 3b	3	GPI 3a
15	GPI 2b	2	GPI 2a
14	GPI 1b	1	GPI 1a



Pin	Signal	Pin	Signal
		19	GND (0V)
37	VCC (+5V)	18	GND (0V)
36	VCC (+5V)	17	GND (0V)
35	GPO 16b	16	GPO 16a
34	GPO 15b	15	GPO 15a
33	GPO 14b	14	GPO 14a
32	GPO 13b	13	GPO 13a
31	GPO 12b	12	GPO 12a
30	GPO 11b	11	GPO 11a
29	GPO 10b	10	GPO 10a
28	GPO 9b	9	GPO 9a
27	GPO 8b	8	GPO 8a
26	GPO 7b	7	GPO 7a
25	GPO 6b	6	GPO 6a
24	GPO 5b	5	GPO 5a
23	GPO 4b	4	GPO 4a
22	GPO 3b	3	GPO 3a
21	GPO 2b	2	GPO 2a
20	GPO 1b	1	GPO 1a



Pin	Signal	Pin	Signal
		13	GND (0V)
25	VCC (+5V)	12	GND (0V)
24	VCC (+5V)	11	GND (0V)
23	VCC (+5V)	10	GND (0V)
22	VCC (+5V)	9	GND (0V)
21	GPO 8b	8	GPO 8a
20	GPO 7b	7	GPO 7a
19	GPO 6b	6	GPO 6a
18	GPO 5b	5	GPO 5a
17	GPO 4b	4	GPO 4a
16	GPO 3b	3	GPO 3a
15	GPO 2b	2	GPO 2a
14	GPO 1b	1	GPO 1a

Figure 16-5: Pin Lists.

