RiddledTV.com
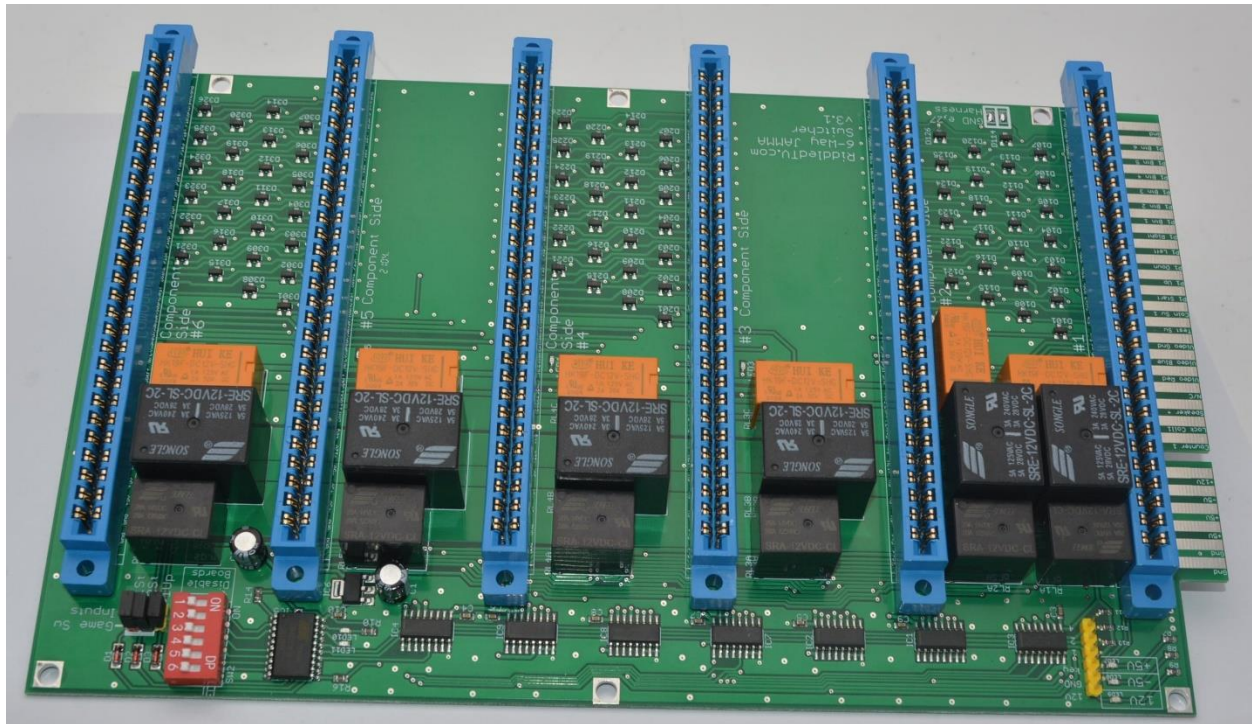# 6-Way, Single-Board JAMMA Switcher

INSTALLATION GUIDE

Figure 1. 6-Way JAMMA Switcher

Features:

- Supports 6 JAMMA boards
- Only 1 JAMMA board is powered at a time.
- No external remotes required
- By default, games are switched by holding Player1-Start and Player2-Start for 1.5 seconds. Alternative buttons can be connected to switch games.
- Configurable to support 6 button inputs per player
- Supports up to 20 Amps on 5V
- -5V power is always switched for each board
- Save State – remembers last active port on power-up
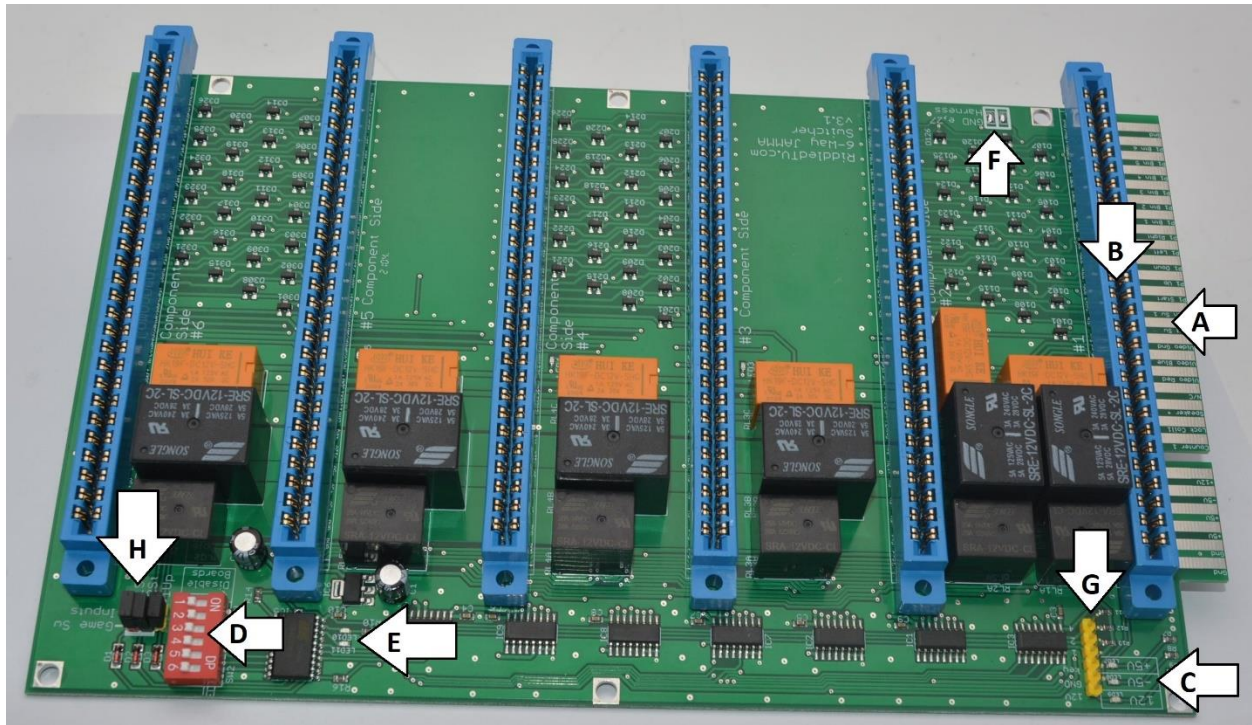
Mainboard Components:

Figure 2 – Single Board, 6-Way Switcher with indicators

A. JAMMA harness input from control panel, monitor, speaker, and power supply
B. JAMMA port for Gameboard #1
C. Power indicator LEDs. 12V, 5V, -5V (these only indicate presence of voltage, not accuracy of voltage levels)
D. Dip switches to disable any unused Jamma Ports.
E. Game Selection buttons indicators. Illuminate when switch inputs are active.
F. Pins e,27 grounding jumpers. By default, these jumpers are closed. Remove the solder jumper to use Jamma pins e,27 as an additional 6th button input.
G. 6pin Auxiliary Board connector.
H. Game Selection Button Inputs (Red and Black headers). If jumpers are installed as shown, players 1 and 2 start buttons (held for 1.5 sec) will switch to the next game. Remove jumpers and connect to your desired input(s) if you desire to use some other inputs to switch games. At this time, the yellow head marked P1Up is not used. This jumper can be left open or closed with no impact.

JAMMA Switcher Pinouts

Solder Side			Parts Side
GROUND	A	1	GROUND
GROUND	B	2	GROUND
+5VDC	C	3	+5VDC
+5VDC	D	4	+5VDC
-5VDC	E	5	-5VDC
+12VDC	F	6	+12VDC
KEY SLOT	H	7	KEY SLOT
COUNTER #2 (N/C)	J	8	*COUNTER #1 (N/C)*
COIL #2 (N/C)	K	9	*COIL #1 (N/C)*
SPEAKER (-)	L	10	SPEAKER (+)
UNDEFINED	M	11	UNDEFINED
VIDEO GREEN	N	12	VIDEO RED
VIDEO SYNC	P	13	VIDEO BLUE
SERVICE SWITCH	R	14	VIDEO GROUND
TILT (SLAM) SWITCH	S	15	TEST SWITCH
COIN SWITCH #2	T	16	COIN SWITCH #1
PLAYER 2 - START	U	17	PLAYER 1 - START
PLAYER 2 - UP	V	18	PLAYER 1 - UP
PLAYER 2 - DOWN	W	19	PLAYER 1 - DOWN
PLAYER 2 - LEFT	X	20	PLAYER 1 - LEFT
PLAYER 2 - RIGHT	Y	21	PLAYER 1 - RIGHT
PLAYER 2 - BUTTON 1	Z	22	PLAYER 1 - BUTTON 1
PLAYER 2 - BUTTON 2	a	23	PLAYER 1 - BUTTON 2
PLAYER 2 - BUTTON 3	b	24	PLAYER 1 - BUTTON 3
PLAYER 2 - BUTTON 4	c	25	PLAYER 1 - BUTTON 4
PLAYER 2 - BUTTON 5	d	26	PLAYER 1 - BUTTON 5
PLAYER 2 - BUTTON 6/GND	e	27	PLAYER 1 - BUTTON 6/GND
GROUND	f	28	GROUND

Figure 3. JAMMA Switcher Pinouts

Installation Instructions:

1. Disconnect AC power.
2. Plug the Switcher into your existing JAMMA harness and mount in a suitable location.
3. Before plugging in gameboards, reconnect AC power, and apply power to the switcher.
4. Verify that the switcher is receiving inputs from your control panel by doing the following:
   a. Press Player1-Start. Verify that the 1st Blue LED on the switcher circuit board illuminates as the Player1-Start button is pressed. Note, If an alternate input button is being used, verify that input in place of Player1-Start.
   b. Press Player2-Start. Verify that the 2nd Blue LED on the switcher circuit board illuminates as the Player2-Start button is pressed. Note, If an alternate input button is being used, verify that input in place of Player2-Start.
5. Turn power switches off, and disconnect AC power
6. Plug JAMMA gameboards into JAMMA Slots. Ensure gameboards are not touching each other or any other metal. Jamma Extension cables may be used to mount gameboards remotely. Note: if Jamma extension cables are used, double-check that the cables are correctly plugged in at both ends.
7. Double-check all your work. Make sure no other metal is touching the circuit boards.
8. Reconnect AC power, and turn the power on.
9. To advance to the next game hold down Player1-Start and Player2-Start buttons.
10. You may need to adjust your monitor's color balance levels.

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Switching Games:

If both jumpers are installed (red to red pins, and black to black pins) the mainboard will switch games when BOTH buttons Player 1-Start and Player 2-Start are pressed for 1.5 seconds. If both buttons are held down, it will continue to cycle through games in 1.5 second increments. **To use alternate button inputs**, disconnect the 2 jumpers, and connect two button inputs of your choice to the two terminals located inside the red box as shown in Figure 4. If only one input button is desired, connect it to BOTH pins. The Switcher will change games when BOTH pins are grounded for 1.5 seconds. Note: At this time, the yellow connector pins labelled "P1Up" are not used.
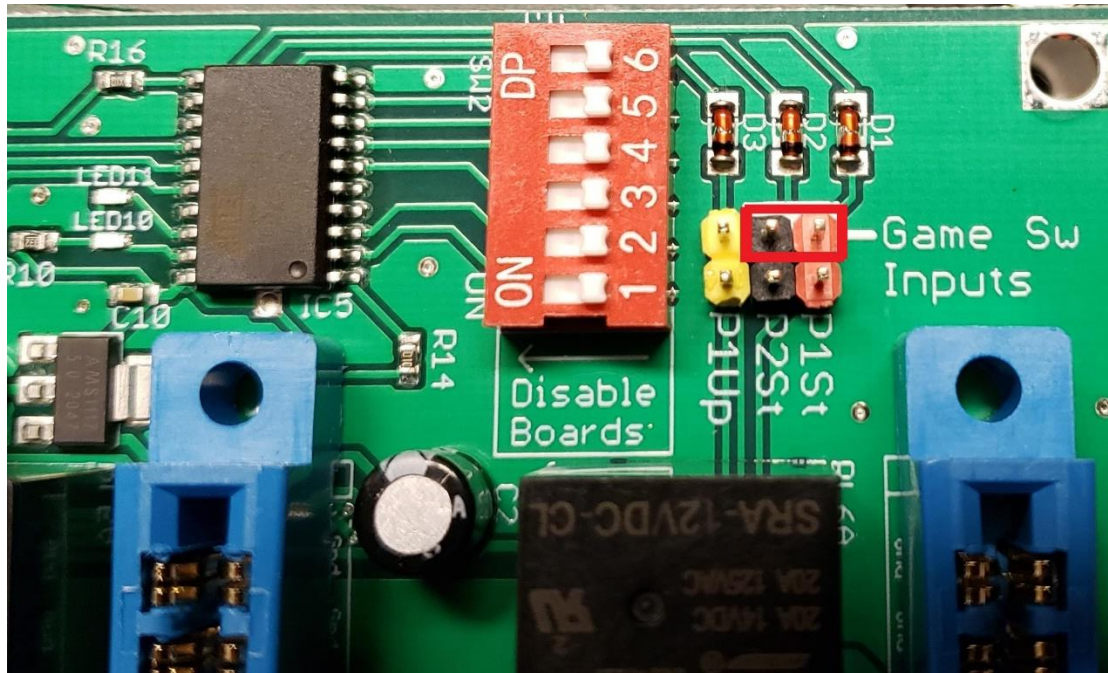

Figure 4. Button Inputs for Game Selection

Indicator lights

The mainboard has 11 indicator LED lights:

- 6 Red indicator lights show which gameboard is currently active.
- Red, Green, and Yellow LEDs indicate that "some" voltage is present on the 5V, -5V, and 12V power supplies. They do not indicate the accuracy of those voltages.
- 2 Blue LED lights that show the game select buttons are currently active. If both LEDs are illuminated for 1.5 seconds, the switcher will switch to the next active Jamma gameboard.

Grounding of JAMMA pins 27, e:

Refer to the Figure 3 for JAMMA pinouts. The initial JAMMA standard indicated that these pins were signal grounds. However, many gameboards have repurposed these pins for button inputs. When you receive your switcher, these jumpers will already be closed as shown in Figure 5 below. To use pins "27" and "e" as button inputs, remove the 2 solder jumpers, using and soldering iron.
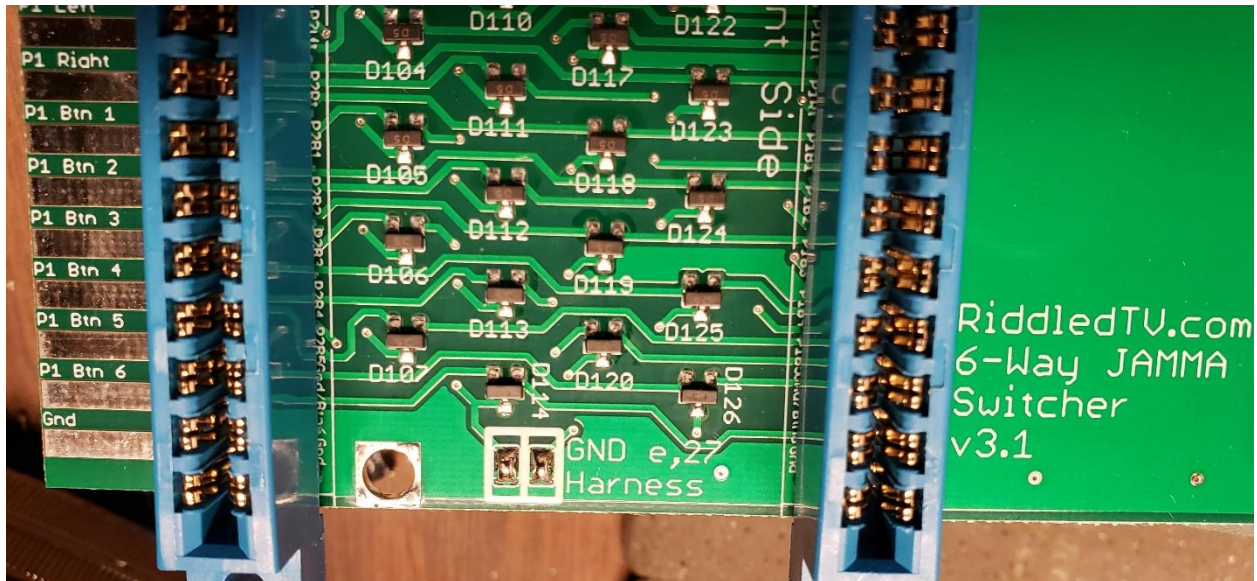

Figure 5. JAMMA Pins "27" and "e" Selection