# 2-Way JAMMA Switcher

## INSTALLATION GUIDE



#### Figure 1. 2-Way EZ JAMMA Switcher

### Each Kit Includes:

- 2-way EZ Mainboard
- EZ Jamma Gameboard Interface
- 3ft ribbon cable
- 3ft power cable

### **Features:**

- Supports 2 JAMMA game boards
- Only 1 game board is powered at a time.
- Stereo (4 wire) speaker inputs supported
- No external remotes are required
- Games are switched by holding Player1-Start and Player2-Start for 1.5 seconds, or alternate buttons can be connected.
- Supports 6 button inputs per player
- Supports up to 20 Amps on +5V
- -5V power is switched for each board

### **Mainboard Components:**

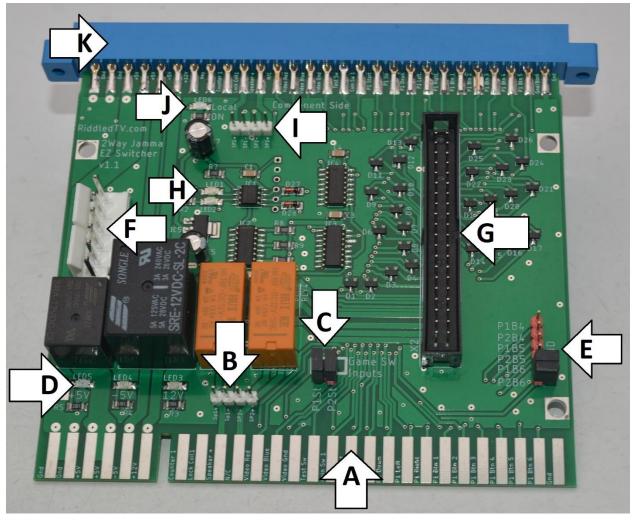


Figure 2 – 2-Way EZ Jamma Switcher with Indicator Arrows

- A. Male JAMMA port for Jamma Harness
- B. 4pin stereo speaker connector. This should connect directly to the speakers
- C. Game Sw Inputs. If jumpers are installed (red to red, and black to black), players 1 and 2 start buttons (held for 1.5 sec) will switch to the next game.
- D. Power indicator LEDs: 12V, +5V, -5V (LEDs indicate presence of voltage, not accuracy of voltage levels)
- E. Connector for additional control panel button inputs for buttons 4-6.
- F. 6pin power connector for remote gameboard interface
- G. Ribbon cable connector for remote gameboard interface
- H. Blue LEDs that illuminate when 1 or both of the game select button inputs are active.
- I. 4pin stereo speaker header for gameboard #1
- J. Red LED indicating that Gameboard #1 is active
- K. Jamma connector for Gameboard #1

## **JAMMA Switcher Pinouts**

Solder Side		Parts Side	
GROUND	А	1	GROUND
GROUND	В	2	GROUND
+5VDC	С	3	+5VDC
+5VDC	D	4	+5VDC
-5VDC	Е	5	-5VDC
+12VDC	F	6	+12VDC
KEY SLOT	н	7	KEY SLOT
COUNTER #2 (N/C)	J	8	COUNTER #1 (N/C)
COIL #2 (N/C)	К	9	COIL #1 (N/C)
SPEAKER1 (-)	L	10	SPEAKER1 (+)
SPEAKER2 (-)	М	11	SPEAKER2 (+)
VIDEO GREEN	Ν	12	VIDEO RED
VIDEO SYNC	Р	13	VIDEO BLUE
SERVICE SWITCH	R	14	VIDEO GROUND
TILT (SLAM) SWITCH	S	15	TEST SWITCH
COIN SWITCH #2	Т	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	х	20	PLAYER 1 - LEFT
PLAYER 2 - RIGHT	Y	21	PLAYER 1 - RIGHT
PLAYER 2 - BUTTON 1	Ζ	22	PLAYER 1 - BUTTON 1
PLAYER 2 - BUTTON 2	а	23	PLAYER 1 - BUTTON 2
PLAYER 2 - BUTTON 3	b	24	PLAYER 1 - BUTTON 3
PLAYER 2 - BUTTON 4	с	25	PLAYER 1 - BUTTON 4
PLAYER 2 - BUTTON 5	d	26	PLAYER 1 - BUTTON 5
PLAYER 2 - BUTTON 6/ <mark>GND</mark>	е	27	PLAYER 1 - BUTTON 6/ <mark>GND</mark>
GROUND	f	28	GROUND

Figure 3. JAMMA Switcher Pinouts

### **Installation Instructions:**

- 1. Disconnect AC power.
- 2. Verify your JAMMA harness wiring matches the standard as shown in Figure 3.
- 3. Plug the Switcher into your existing JAMMA harness and mount in a suitable location. Note: Do NOT connect the JAMMA gameboards yet.
- 4. Double-check all your work.
- 5. Reconnect AC power, and turn the power on.
- 6. Verify that the switcher is receiving inputs from your control panel by doing the following:
  - a. Press Player1-Start. Verify that the 1<sup>st</sup> 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 the input from that button in place of Player1-Start.
  - b. Press Player2-Start. Verify that the 2<sup>nd</sup> 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 the input from that button in place of Player2-Start.
- 7. Turn power switches off, and disconnect AC power
- 8. Plug the JAMMA gameboards into the JAMMA Switcher. Make certain that all boards are securely mounted and are not contacting other wiring or metal pieces inside your arcade cabinet.
- 9. Connect 6-wire cable between switcher and remote gameboard interface.
- 10. Connect ribbon cable between switcher and remote gameboard interface.
- 11. If applicable, connect 4wire speaker cables to your gameboard.
- 12. Reconnect AC power, and turn the power on
- 13. To advance to the next game hold down both Player1-Start and Player2-Start buttons.

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### **Switching Games:**

If both jumpers are installed, the mainboard will switch games when buttons Player 1-Start and Player 2-Start are pressed for 1.5 seconds. To use alternate button inputs, remove the 2 jumpers, and connect one or two button inputs of your choice to the two terminals on the <u>top side</u>, marked as Game SW Inputs. If only one input button is desired, connect it to BOTH Game Switch Input pins. The Switcher will change games when both inputs are grounded for 1.5 seconds. If both buttons are held down, it will cycle between gameboards in 1.5 second increments.

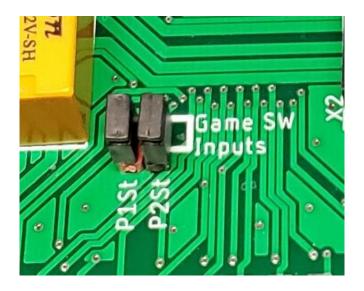


Figure 4. Button Inputs for Game Selection

### **Indicator lights**

The mainboard has 6 indicator LED lights:

- 1 Red LEDs to indicate when gameboard #1 is active.
- 3 Power Supply indicator LEDs. Red, Green, and Yellow LEDs indicate that "some" voltage is present on the 5V, -5V, and 12V power supplies. Please note: LED lights do <u>not</u> indicate the accuracy of those voltages. Please check your voltage levels with gameboards active.
- 2 Blue LEDs indicate that the switcher detects one or both of the Game Switch Inputs are pressed.

### 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 as 6<sup>th</sup> button inputs. When you receive your switcher, pins "27" and "e" will be connected to Ground via two jumpers, as shown in Figure 5. To use Jamma pins "27" and "e" as button inputs, remove the two jumpers. It is recommended to leave the jumpers in place if the 6<sup>th</sup> button inputs are not needed.

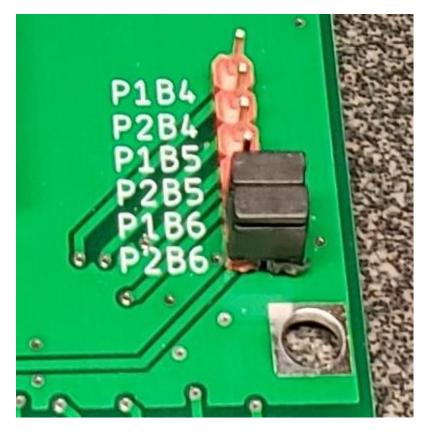


Figure 5. JAMMA Pins "27" and "e", shown with both jumpers in place.

### **Additional Support:**

For questions not answered in this installation guide, please contact <a href="mailto:support@RiddledTV.com">support@RiddledTV.com</a>