OUTZONE ™

VERTICAL 2 PLAYER, 2 JOYSTICK, 2 BUTTON JAMMA COMPATIBLE CONVERSION KIT

POWER REQUIREMENTS		MONITOR REQUIREMENTS
+5 VDC	7 amp minimum	Vertical Mount Raster Scan
+12 VDC	1 amp minimum	Negative Composite Sync
−5 VDC	1 amp minimum	Required for Jamma Compatibility

ROMSTAR® INC.

OUT ZONE

DIP SW 1

		1	2	3	4	5	6	7	8
PICTURE INDICATE	* NORMAL	OFF							
	OPPOSITE	ON							
FUNCTION CHECK	* NORMAL PLAY		OFF						
	TEST PATTERN		ON						
DEMO SOUND	* ON				OFF				
	NO SOUND				ON				
COIN SW 1 1 COIN 1 PLAY						OFF	OFF		
FOR 1 2						ON	OFF		
U.S.A. 2 1						OFF	ON		
2 3						ON	ON		
COIN SW 2 1 1								OFF	OFF
FOR 1 2								ON	OFF
U.S.A. 2 1								OFF	ON
2 3								ON	ON

DIP SW 2

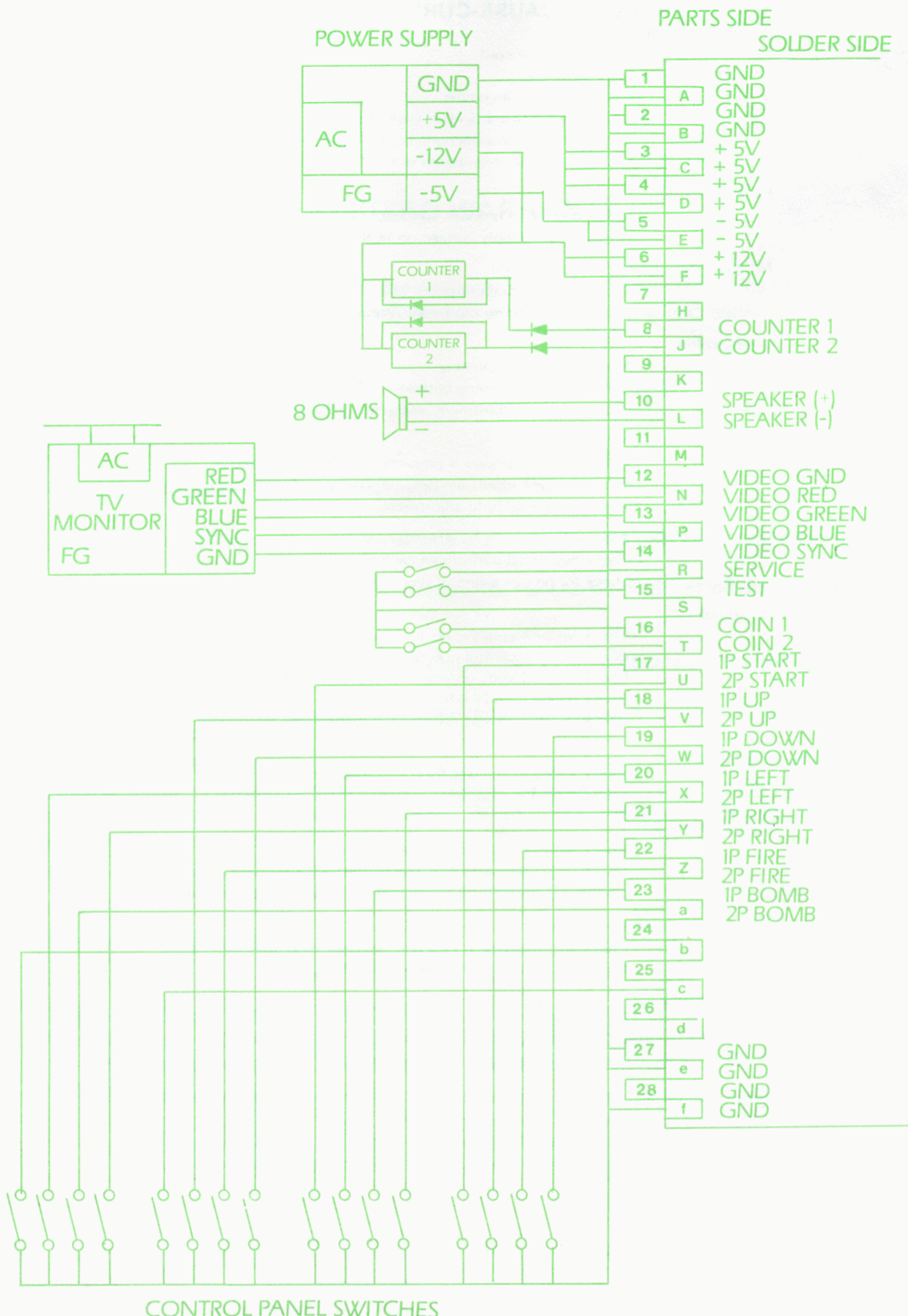|		1	2	3	4	5	6	7	8
DIFFICULTY	*B NORMAL	OFF	OFF						
	A EASY	ON	OFF						
	C DIFFICULT	OFF	ON						
	D MORE DIFFICULT	ON	ON						
EXTRA PLAYER	EVERY 300K POINTS			OFF	OFF				
	*200k and 500k points			ON	OFF				
	300k points only			OFF	ON				
	NO EXTRA			ON	ON				
NUMBER OF PLAYERS	* 3					OFF	OFF		
	5					ON	OFF		
	2					OFF	ON		
	1					ON	ON		
NO DETH MODE	* NORMAL PLAY							OFF	
	CAN PLAY ONLY ON PLAYER							ON	
NOT USE									OFF

56 PIN EDGE CONN. PIN-OUT CHART
(JAMMA COMPATIBLE)

WIRE COLOR	SOLDER SIDE			PARTS SIDE	WIRE COLOR
BLACK	GND	A	1	GND	BLACK
BLACK	GND	B	2	GND	BLACK
RED	+5V	C	3	+5V	RED
1 RED	+5V	D	4	+5V	RED
WHITE	-5V	E	5	-5V	WHITE
YELLOW	+12V	F	6	+12V	YELLOW
	KEY	H	7	KEY	
3 BROWN/WHITE	COIN COUNTER 2	J	8	COIN COUNTER 1	BROWN *2*
5 RED/BLACK	COIN LOCK OUT 2	K	9	COIN LOCK OUT 1	RED *4*
WHITE/BLACK	SP (-)	L	10	SP(+)	WHITE
OP.-BLU/BLACK	N.C.	M	11	N.C.	BLUE-OPTION
GREEN	VIDEO GREEN	N	12	VIDEO RED	RED
GRAY	VIDEO SYNC	P	13	VIDEO BLUE	BLUE
6 RED/BLACK	SERVICE SWITCH	R	14	VIDEO GND	BLACK
OP.-BRN/BLACK	TILT SW.	S	15	TEST SW.	BROWN *7*
9	COIN SW. 2 *9*	T	16	COIN SW. 1	WHITE *8*
WHITE/GRAY	START SW. 2	U	17	START SW. 1	GRAY
WHITE/VIOLET	2P UP	V	18	1P UP	VIOLET
WHITE/BLUE	2P DOWN	W	19	1P DOWN	BLUE
WHITE/GREEN	2P LEFT	X	20	1P LEFT	GREEN
WHITE/YELLOW	2P RIGHT	Y	21	1P RIGHT	YELLOW
WHITE/ORANGE	2P FIRE	Z	22	1P FIRE	ORANGE
WHITE/RED	2P BOMB	a	23	1P BOMB	RED
WHITE/BROWN	2P PUSH 3 *	b	24	1P PUSH 3 *	BROWN
GREEN/WHITE	N.C.	c	25	N.C.	BLUE/WHITE
YELLOW/WHITE	N.C.	d	26	N.C.	RED/WHITE
BLACK	GND	e	27	GND	BLACK *12*
OPTION-BLACK	GND	f	28	GND	BLACK-OPTION

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JAMMA 56 PIN
WIRING DIAGRAM

POWER SUPPLY

PARTS SIDE

SOLDER SIDE

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

Power Supply labels: AC, FG, GND, +5V, -12V, -5V

COUNTER 1

COUNTER 2

8 OHMS + / −

TV MONITOR — AC, FG — RED, GREEN, BLUE, SYNC, GND

CONTROL PANEL SWITCHES

CHECKPOINTS IN CASE OF DIFFICULTY
PROBLEM / CAUSE-CURE

No Raster/No Video
- Check A.C. line cord
- Check line fuse
- Check monitor brightness
- Check power switch and/or interlock switch
- Check all solder connections on line filter and transformer
- Check for proper orientation of the PCB connector

Raster/No Video
- Check all PCB to monitor connections
- Check power supply voltage on PCB

No Video/Game sounds can be heard
- Check monitor brightness
- Check all PCB to monitor connections

Wrong colors
- Monitor needs degaussing
- Check for proper wiring between PCB and monitor
- Check monitor adjustment and adjust if necessary

Wavy picture
- Check monitor ground is properly connected to monitor
- Be certain sync inputs are properly connected to monitor
- Check horizontal hold adjustment

Horizontal/Vertical Roll
- Check horizontal and/or vertical hold adjustments
- Check for proper wiring of sync from PCB to monitor

No sound
- Check for – 5 volts on edge connector of PCB
- Check volume control potentiometer adjustment
- Check for +12 volts on edge connector of PCB
- Check wiring from PCB to speaker
- Check speaker for low resistance between the "+" and "–" tabs

Bad sound
- Check wiring to speaker for bad solder connections
- Check sound with another speaker

No switch input
- Check ground connection to switch/es
- Check wiring between PCB and switch/es for proper connection
- Check switch/es with an ohmmeter to verify proper operation

Switch operates incorrect function
- Check wiring between PCB and switches for proper orientation
- Check wiring for shorts between switch inputs

No coin meter
- Check wiring to coin meter
- Check that +5 volts is on "+" side of meter
- Verify a +5 volt meter is used

When coin switch is made and meter pulses, the screen blanks out and/or game resets
- Verify that a meter with a diode is used
- If no diode is built in meter a IN4004 can be used across the meter.
  Cathode to "+" side of meter and anode to "–" side of meter