

CGA/VGA JAMMA

 **LASSICAL**
HORIZONTAL
GAME 
COLLECTION

I. PCB DIP Switch Settings

DIP SW3		1	2	3	4
Screen Orientation	Normal	OFF			
	Flip Screen	ON			
Display Mode (CRT)	CGA-15.75Khz		OFF		
	VGA-31.5Khz		ON		
High Score Saver	Disabled			OFF	
	Enabled			ON	
Mode	Normal				OFF
	Test				ON

II. System Setup

Keep **TEST SW** or **SERVICE SW** pressed or DIPSW 3-4 ON and power on to enter system setup mode or system test mode.

The first page is **Screen Test**. You may tune your screen size at this page or press TEST SW to enter next page.

If high score saver is supported and enabled, the second page is **Clear High Score**. You may clear all saved high scores by pressing both START and S1 buttons. Press TEST SW to enter next page or press SERVICE SW to return last page.

The next page is **System DIPSW Setup**. Use joystick to move cursor or S1 buttons to switch ON/OFF. The system DIPSW is shown below:

System DIPSW Setup for All Amusement PCBs

DIP SW1		1	2	3	4	5	6	7	8
Coin 1	1 coin 1 credit	OFF	OFF	OFF	OFF				
	1 coin 2 credit	ON	OFF	OFF	OFF				
	1 coin 3 credit	OFF	ON	OFF	OFF				
	1 coin 4 credit	ON	ON	OFF	OFF				
	2 coin 1 credit	OFF	OFF	ON	OFF				
	2 coin 2 credit	ON	OFF	ON	OFF				
	2 coin 3 credit	OFF	ON	ON	OFF				
	2 coin 4 credit	ON	ON	ON	OFF				
	3 coin 1 credit	OFF	OFF	OFF	ON				
	3 coin 2 credit	ON	OFF	OFF	ON				
	3 coin 3 credit	OFF	ON	OFF	ON				
	3 coin 4 credit	ON	ON	OFF	ON				
	4 coin 1 credit	OFF	OFF	ON	ON				
	4 coin 2 credit	ON	OFF	ON	ON				
	4 coin 3 credit	OFF	ON	ON	ON				
	4 coin 4 credit	ON	ON	ON	ON				

Coin 2	1 coin 1 credit					OFF	OFF	OFF	OFF
	1 coin 2 credit					ON	OFF	OFF	OFF
	1 coin 3 credit					OFF	ON	OFF	OFF
	1 coin 4 credit					ON	ON	OFF	OFF
	2 coin 1 credit					OFF	OFF	ON	OFF
	2 coin 2 credit					ON	OFF	ON	OFF
	2 coin 3 credit					OFF	ON	ON	OFF
	2 coin 4 credit					ON	ON	ON	OFF
	3 coin 1 credit					OFF	OFF	OFF	ON
	3 coin 2 credit					ON	OFF	OFF	ON
	3 coin 3 credit					OFF	ON	OFF	ON
	3 coin 4 credit					ON	ON	OFF	ON
	4 coin 1 credit					OFF	OFF	ON	ON
	4 coin 2 credit					ON	OFF	ON	ON
	4 coin 3 credit					OFF	ON	ON	ON
	4 coin 4 credit					ON	ON	ON	ON

DIP SW2		1	2	3	4	5	6	7	8
Demo Music	Yes	OFF							
	No	ON							
Game Demo Sound	No		OFF						
	Yes		ON						
Free Play	No			OFF					
	Yes			ON					
Cabinet	Upright/2 Joystick				OFF	OFF			
	Cocktail				ON	OFF			
	Upright/1 Joysticks				OFF	ON			
	Cocktail				ON	ON			

Each game can be enabled or disabled respectively. Disabled games would not be shown for playing. Press setup to finish this step or press TEST SW to enter followed pages for DIPSW setup of each game or SERVICE SW to return last page.

The last page is **I/O Test**. You may diagnose PCB I/O status at this page.

For system test mode, only **Screen Test** and **I/O Test** pages are included.

III. JAMMA Wire Map

Part Side		Solder Side	
GND	1	1	GND
GND	2	2	GND
+5V	3	3	+5V
+5V	4	4	+5V
	5	5	
+12V	6	6	+12V
	7	7	
1P COIN METER	8	8	2P COIN METER
	9	9	
SPEAKER +	10	10	SPEAKER -
1P-S6	11	11	2P-S6
VIDEO R	12	12	VIDEO G
VIDEO B	13	13	VIDEO SYNC
GND	14	14	SERVICE
TEST	15	15	
1P-COIN	16	16	2P-COIN
1P-START	17	17	2P-START
1P-UP	18	18	2P-UP
1P-DOWN	19	19	2P-DOWN
1P-LEFT	20	20	2P-LEFT
1P-RIGHT	21	21	2P-RIGHT
1P-S1	22	22	2P-S1
1P-S2	23	23	2P-S2
1P-S3	24	24	2P-S3
1P-S4	25	25	2P-S4
1P-S5	26	26	2P-S5
GND	27	27	GND
GND	28	28	GND

Game List

Defender



Stargate



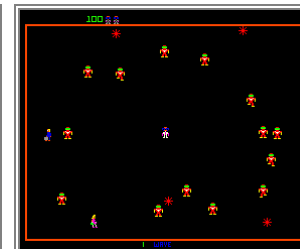
Bubbles



Joust



Robotron



Blaster



Splat



Rally X



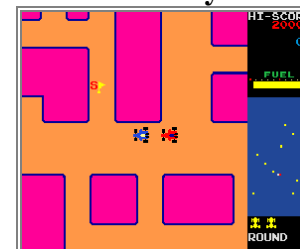
Battle City



Mario Bros.



New Rally X



Ghost'n Goblins



PS: The PCB voltage of +5V pin CAN NOT exceed +5.5V .

Game List

Solomon's Key



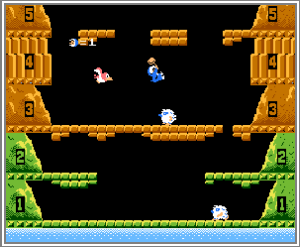
Gradius



Sky Kid



Ice Climber



Super Mario Bros.



Do! RunRun



Kick Rider



Defender DIPSWS Setup

DIP SW1	1	2	3	4	5	6	7	8
Life	3	OFF	OFF	OFF				
	4	ON	OFF	OFF				
	5	OFF	ON	OFF				
	6	ON	ON	OFF				
	7	OFF	OFF	ON				
	8	ON	OFF	ON				
	2	OFF	ON	ON				
	9	ON	ON	ON				
Extra Life	10000				OFF	OFF	OFF	
	20000				ON	OFF	OFF	
	50000				OFF	ON	OFF	
	80000				ON	ON	OFF	
	100000				OFF	OFF	ON	
	200000				ON	OFF	ON	
	500000				OFF	ON	ON	
990000				ON	ON	ON		

Stargate DIPSWS Setup

DIP SW1	1	2	3	4	5	6	7	8
Life	3	OFF	OFF	OFF				
	4	ON	OFF	OFF				
	5	OFF	ON	OFF				
	6	ON	ON	OFF				
	7	OFF	OFF	ON				
	8	ON	OFF	ON				
	2	OFF	ON	ON				
	20	ON	ON	ON				
Extra Life	10000				OFF	OFF	OFF	
	15000				ON	OFF	OFF	
	20000				OFF	ON	OFF	
	25000				ON	ON	OFF	
	30000				OFF	OFF	ON	
	40000				ON	OFF	ON	
	50000				OFF	ON	ON	
5000				ON	ON	ON		

Bubbles DIPSW Setup

DIP SW1		1	2	3	4	5	6	7	8
Life	3	OFF	OFF	OFF					
	4	ON	OFF	OFF					
	5	OFF	ON	OFF					
	6	ON	ON	OFF					
	7	OFF	OFF	ON					
	8	ON	OFF	ON					
	2	OFF	ON	ON					
	20	ON	ON	ON					
Extra Life	25000				OFF	OFF	OFF		
	30000				ON	OFF	OFF		
	50000				OFF	ON	OFF		
	60000				ON	ON	OFF		
	70000				OFF	OFF	ON		
	80000				ON	OFF	ON		
	10000				OFF	ON	ON		
99000				ON	ON	ON			
Difficulty	Normal							OFF	OFF
	Easy							ON	OFF
	Hard							OFF	ON
	Hardest							ON	ON

Robotron DIPSW Setup

DIP SW1		1	2	3	4	5	6	7	8
Life	3	OFF	OFF	OFF					
	4	ON	OFF	OFF					
	5	OFF	ON	OFF					
	6	ON	ON	OFF					
	7	OFF	OFF	ON					
	8	ON	OFF	ON					
	2	OFF	ON	ON					
	20	ON	ON	ON					
Extra Life	25000				OFF	OFF			
	30000				ON	OFF			
	50000				OFF	ON			
	20000				ON	ON			
Difficulty	5(recommended)						OFF	OFF	OFF
	6						ON	OFF	OFF
	4						OFF	ON	OFF
	7						ON	ON	OFF
	3						OFF	OFF	ON
	8						ON	OFF	ON
	2(liberal)						OFF	ON	ON
	9(conservative)						ON	ON	ON

Joust DIPSW Setup

*Cocktail mode not supported

DIP SW1		1	2	3	4	5	6	7	8
Life	5	OFF	OFF	OFF					
	6	ON	OFF	OFF					
	7	OFF	ON	OFF					
	8	ON	ON	OFF					
	2	OFF	OFF	ON					
	3	ON	OFF	ON					
	4	OFF	ON	ON					
	20	ON	ON	ON					
Extra Life	25000				OFF	OFF	OFF		
	30000				ON	OFF	OFF		
	50000				OFF	ON	OFF		
	60000				ON	ON	OFF		
	70000				OFF	OFF	ON		
	80000				ON	OFF	ON		
	10000				OFF	ON	ON		
99000				ON	ON	ON			
Difficulty	Normal							OFF	OFF
	Easy							ON	OFF
	Hard							OFF	ON
	Hardest							ON	ON

DIP SW2		1	2	3	4	5	6	7	8
Control	2 Joysticks*	OFF	OFF						
	Joystick / 4 Buttons	ON	OFF						
	Joystick / 1 Button	OFF	ON						
	Joystick / 1 Button	ON	ON						

* Only valid when system is set to UPRIGHT/2JOYSTICKS mode.

Blaster DIPSW Setup

DIP SW1		1	2	3	4	5	6	7	8
Life	3	OFF	OFF	OFF					
	4	ON	OFF	OFF					
	5	OFF	ON	OFF					
	6	ON	ON	OFF					
	7	OFF	OFF	ON					
	8	ON	OFF	ON					
	2	OFF	ON	ON					
Extra Life	20	ON	ON	ON					
	10000				OFF	OFF			
	15000				ON	OFF			
	20000				OFF	ON			
Difficulty	5000				ON	ON			
	Normal						OFF	OFF	
	Easy						ON	OFF	
	Hard						OFF	ON	
	Hardest						ON	ON	

DIP SW2		1	2	3	4	5	6	7	8
Control	Joystick / 4 Buttons	OFF							
	Joystick / 1 Button	ON							
Seconds/ Wave	30		OFF	OFF	OFF				
	45		ON	OFF	OFF				
	60		OFF	ON	OFF				
	75		ON	ON	OFF				
	90		OFF	OFF	ON				
	25		ON	OFF	ON				
	20		OFF	ON	ON				
	15		ON	ON	ON				

Rally X DIPSW Setup

DIP SW1		1	2	3	4	5	6	7	8
Extra Life	None	OFF	OFF						
	A	ON	OFF						
	B	OFF	ON						
	C	ON	ON						
Difficulty	2Cars,Easy			OFF	OFF	OFF			
	3Cars,Easy			ON	OFF	OFF			
	1Car,Medium			OFF	ON	OFF			
	2Cars,Medium			ON	ON	OFF			
	3Cars,Medium			OFF	OFF	ON			
	1Car,Hard			ON	OFF	ON			
Machine Set	2Cars,Hard			OFF	ON	ON			
	3Cars,Hard			ON	ON	ON			
	Set 1						OFF		
	Set 2						ON		

Splat DIPSW Setup *Cocktail mode not supported

DIP SW1		1	2	3	4	5	6	7	8
Life	3	OFF	OFF	OFF					
	4	ON	OFF	OFF					
	5	OFF	ON	OFF					
	6	ON	ON	OFF					
	7	OFF	OFF	ON					
	8	ON	OFF	ON					
	2	OFF	ON	ON					
Extra Life	20	ON	ON	ON					
	25000				OFF	OFF			
	40000				ON	OFF			
	80000				OFF	ON			
Difficulty	10000				ON	ON			
	5(normal)						OFF	OFF	OFF
	6						ON	OFF	OFF
	4						OFF	ON	OFF
	7						ON	ON	OFF
	3						OFF	OFF	ON
	8						ON	OFF	ON
	2(easy)						OFF	ON	ON
	9(hard)						ON	ON	ON

Battle City DIPSW Setup *Cocktail mode not supported

DIP SW1		1	2	3	4	5	6	7	8
2 Players Game	2 Credits	OFF							
	1 Credit	ON							
Life	3		OFF						
	5		ON						
Color Palette	Normal			OFF	OFF				
	Wrong 1			ON	OFF				
	Wrong 2			OFF	ON				
	Wrong 3			ON	ON				

Machine Set	Set 1									OFF	
	Set 2									ON	

Mario Bros. DIPSW Setup *Cocktail mode not supported

DIP SW1		1	2	3	4	5	6	7	8
Life	3	OFF	OFF						
	4	ON	OFF						
	5	OFF	ON						
	6	ON	ON						
Extra Life	20000			OFF	OFF				
	30000			ON	OFF				
	40000			OFF	ON				
	None			ON	ON				
Difficulty	Easy					OFF	OFF		
	Medium					ON	OFF		
	Hard					OFF	ON		
	Hardest					ON	ON		

Solomon's Key DIPSW Setup

DIP SW1		1	2	3	4	5	6	7	8
Difficulty	Normal	OFF	OFF						
	Hard	ON	OFF						
	Easy	OFF	ON						
	Hardest	ON	ON						
Timer Speed	Normal			OFF	OFF				
	Fast			ON	OFF				
	Slow			OFF	ON				
Extra	Normal						OFF		
	Hard						ON		
Extra Life	30k 200k 500k						OFF	OFF	OFF
	30k						ON	OFF	OFF
	30k 200k						OFF	ON	OFF
	200k						ON	ON	OFF
	100k 300k 800k						OFF	OFF	ON
	100k						ON	OFF	ON
	100k 300k						OFF	ON	ON
None						ON	ON	ON	

New Rally X DIPSW Setup

DIP SW1		1	2	3	4	5	6	7	8
Extra Life	None	OFF	OFF						
	A	ON	OFF						
	B	OFF	ON						
	C	ON	ON						
Life	3			OFF					
	4			ON					
Difficulty	Easy				OFF	OFF			
	Medium				ON	OFF			
	Hard				OFF	ON			
	Hardest				ON	ON			

DIP SW2		1	2	3	4	5	6	7	8
Life	3	OFF	OFF						
	5	ON	OFF						
	4	OFF	ON						
	2	ON	ON						

Ghost'n Goblins DIPSW Setup

DIP SW1		1	2	3	4	5	6	7	8
Life	3	OFF	OFF						
	4	ON	OFF						
	5	OFF	ON						
	7	ON	ON						
Extra Life	20k 70k 70k			OFF	OFF				
	30k 80k 80k			ON	OFF				
	20k 80k			OFF	ON				
	30k 80k			ON	ON				
Difficulty	Normal					OFF	OFF		
	Easy					ON	OFF		
	Hard					OFF	ON		
	Hardest					ON	ON		

Gradius DIPSW Setup

DIP SW1		1	2	3	4	5	6	7	8
Life	3	OFF							
	4	ON							
Extra Life	100k		OFF	OFF					
	300k		ON	OFF					
	200k		OFF	ON					
	400k		ON	ON					
Difficulty	Normal				OFF				
	Hard				ON				

Sky Kid DIPSW Setup *Cocktail mode not supported

DIP SW1		1	2	3	4	5	6	7	8
Life	3	OFF	OFF						
	2	ON	OFF						
	1	OFF	ON						
	5	ON	ON						
Extra Life	30k and 90k			OFF	OFF				
	20k and 80k			ON	OFF				
	30k every 90k			OFF	ON				
	20k every 80k			ON	ON				

Ice Climber DIPSW Setup *Cocktail mode not supported

DIP SW1		1	2	3	4	5	6	7	8
Life	3	OFF	OFF						
	5	ON	OFF						
	4	OFF	ON						
	7	ON	ON						
Difficulty	Normal			OFF					
	Hard			ON					
Time Before Bear	Long				OFF				
	Short				ON				

Super Mario Bros. DIPSW Setup

DIP SW1		1	2	3	4	5	6	7	8
Life	3	OFF							
	2	ON							
Extra Life	100		OFF	OFF					
	200		ON	OFF					
	150		OFF	ON					
	250		ON	ON					
Timer	Normal				OFF				
	Fast				ON				
Continue Life	4					OFF			
	3					ON			

Do! Run Run DIPSW Setup

DIP SW1		1	2	3	4	5	6	7	8
Difficulty	Easy	OFF	OFF						
	Medium	ON	OFF						
	Hard	OFF	ON						
	Hardest	ON	ON						
Extra	Easy			OFF					
	Hard			ON					
Special	Given				OFF				
	Not Given				ON				
Life	3					OFF			
	5					ON			

Kick Rider DIPSW Setup

DIP SW1		1	2	3	4	5	6	7	8
Difficulty	Easy	OFF	OFF						
	Medium	ON	OFF						
	Hard	OFF	ON						
	Hardest	ON	ON						