Operating Instructions

For Model _308ADEF_

WILLIAMS PINBALL-MPU

WILLIAMS

```
         SL2                    START 2              SR2                    5V

              x                      x           x
 LLP    SL1        SL3       LRP    x    x   RLP   SR1   x    SR3   RRP
             SL5                      START1            SR5              ON   OFF
                  x      x       x    x    x       x    x     x
             SL4                                   SR4
    x                                   x
                  x                                x
     SL6              SL7              COIN        SR6        SR7         POWER
         x               x        .          x          x          x
                                                                         ON   OFF
```
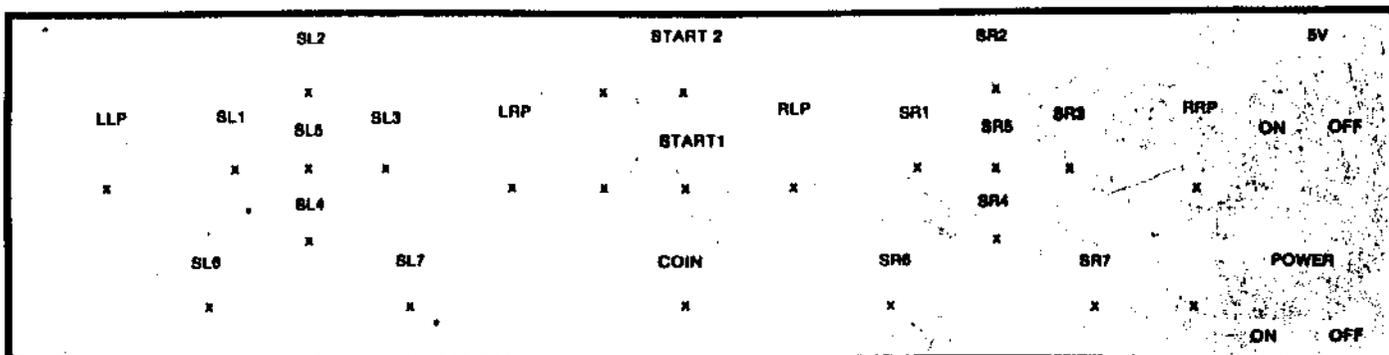
1. Insert 308A card into "A" program connector, number side up.

2. Connect 308A 9-pin connector to MPU board 1J2.

3. Plug in 308D card vertically onto MPU board, 1J4, 1J5, 1J6 and 1J7. Connect 4-pin connector on 308A card into 1J1 connector on 308D card.

4. Plug 308F card onto 40-pin MPU board, 1J1.

5. Plug 308E keyboard card onto 308F card connectors 2J2 and 2J3.

6. Push 5 volt switch to ON.

7. Push POWER switch to ON.

8. Keyboard 308E WHITE switches are ROW and BLACK switches are COLUMN of switch MATRIX. Refer to service book for switch usuage.
   EXAMPLE: Phoenix Game-4 WHITE and 1 BLACK is RIGHT COIN switch. 3 WHITE and 1 BLACK is CREDIT. 5 WHITE and 5 BLACK are OUTHOLE.

9. To enter DIAGNOSTICS push SW1 (DIAG. START) on MPU board. AUTO/MANUAL switch to AUTO on 308D card. Push ADVANCE on 308D card for test desired.

10. When in DISPLAY DIGITS TEST, both PLAYERS switches on 308D must be moved to check all 4 PLAYERS readouts. Also when in PLAY mode to get all 4 PLAYERS score the same switches must be moved.

11. If LAMP MATRIX lines are all correct, LEDS 1 thru 8 will blink ON and OFF during 01 diagnostic test.

12. During 02 diagnostic test, lamp matrix LEDS will be on and CB2 should be on.

13. Refer to service book for all tests.

WILLIAMS PHOENIX

IC-18 PIA

P-NOP per book
ALL SWITCHES OPEN

PIN	SIG				
21	5995				
22	3827				
23	755U				
24	HAP7				
25	0001				
26	U	Close switch 8	Sig.	=	5U28
27	U	Close switch 7	Sig.	=	9U3A
28	U	Close switch 6	Sig.	=	2812
29	U	Close switch 5	Sig.	=	6H70
30	U	Close switch 4	Sig.	=	FA91
31	U	Close switch 3	Sig.	=	5A7F
32	U	Close switch 2	Sig.	=	UCP5
33	U	Close switch 1	Sig.	=	U333
34	0001				
35	CCCC				
36	5555				
37	0001				
38	0001				
39	0001				
40	0001				

ALL SWITCHES OPEN

PIN					
2	0001	Close switch 1	Sig.	=	0000
3	0001	Close switch 2	Sig.	=	0000
4	0001	Close switch 3	Sig.	=	0000
5	0001	Close switch 4	Sig.	=	0000
6	0001	Close switch 5	Sig.	=	0000
7	0001	Close switch 6	Sig.	=	0000
8	0001	Close switch 7	Sig.	=	0000
9	0001	Close switch 8	Sig.	=	0000
10	0001	Close switch 1	Sig.	=	0000
11	0001	Close switch 2	Sig.	=	0000
12	0001	Close switch 3	Sig.	=	0000
13	0001	Close switch 4	Sig.	=	0000
14	0001	Close switch 5	Sig.	=	0000
15	0001	Close switch 6	Sig.	=	0000
16	0001	Close switch 7	Sig.	=	0000
17	0001	Close switch 8	Sig.	=	0000

Williams Phoenix
        Roms - Proms

Clock   CPU-37 ⌐
GND   CPU-21

IC-17   IC-20
Stop   IC-15-7 ⌐   Stop   IC-15-5 ⌐
Start   IC-15-7 ⌐   Start   IC-15-5 ⌐

Pin Signature   Signature

  9   655C   80CC
 10   5HP4   1UF9
 11   UCC5   57PC
 13   OPP9   7POU
 14   1CP1   F96C
 15   41H3   C40F
 16   1U5H   0887
 17   9C8A   62C3

IC-21 & 22
Stop   IC-25-1 ⌐
Start   IC-25-1 ⌐

Pin Signature

  9   5HPU
 10   0919
 11   0A8A
 13   0617
 14   C152
 15   A204
 16   6323
 17   9409

Williams Pin
        Phoenix

6800 NOP

Clock   37
S/S   25
GND   21

	Pin	Sig.		Pin	Sig.
A0	9	UUUU	A8	17	7791
A1	10	FFFF	A9	18	6321
A2	11	8484	A10	19	37C5
A3	12	P763	A11	20	6UZ8
A4	13	1U5P	A12	22	4FCA
A5	14	0356	A13	23	4868
A6	15	U759	A14	24	9UP1
			A15	25	0002