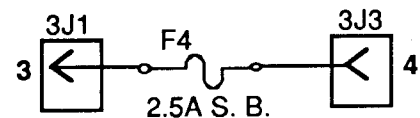


Amendments and Additions to the **HIGH SPEED Instruction Manual**

We are furnishing two types of corrections to the manual. The first group consists of "pen and ink" changes, which can be easily marked into your manual. The second group includes lists and diagrams, which you can copy and paste into your manual.

Pen and Ink Amendments/Additions

- | <i>Page</i> | <i>Information</i> |
|-------------|---|
| 2 | Jumpers for <i>Revision A</i> CPU Boards (having only jumpers W1 through W7): W1, W2, W4, W5, and W7 <u>should</u> be connected. Jumpers for <i>Revision B</i> CPU Boards (having jumpers W1 through W16): W1, W2, W4, W5, W7, W8, W11, W12, W13, W14, W16, W17, and W18 <u>should</u> be connected. |
| 27 | Under SWITCH TESTS, in paragraph 3.:
To obtain the switch 09 indication, connect the test jumper between 1J10-9 and 1J8-2, not 1J10-1. (A jumper between 1J10-1 and 1J8-2 actually gives an indication of switch 16.) |
| 28 | Change the voltage in check 1 from 18.7 to 19.4 VAC. |
| 37 | Change "silicon" in drawing note to SILICONE. |
| 46 | Change voltage from 6.3 to 5.9 VAC at input to 3J8. Designations for terminals on connectors 7P6 and 7J6 change, as follows: On +34V line, terminal 3 should be 1; on 5.9VAC line, terminal 1 should be 2, and 2 should be 3. |
| 47 | a. Change color on 115.0VAC line at 7J5-9 from BRN to ORN.
b. Change connector designations: 7P4 to 7P2, and 7J4 to 7J2.
c. Change color on line at 7P2-5 (formerly 7P4-5) from GRY to GRY-WHT.
d. Change color on line at 7P2-4 (formerly 7P4-4) from GRY to GRY-GRN.
e. Change F5 to F6 in POWER SUPPLY box. Also, change F4 to F5 in POWER SUPPLY box.
f. Change 3J6 on lowest connector on right side of POWER SUPPLY box to 3J8.
g. Add the words, Relay Contacts, near the two sets of contacts in the lower center of the box labelled POWER SUPPLY box.
h. Add p/n D-8345-541 above the words POWER SUPPLY along the bottom border of that box.
i. Add a curved line between the circles labelled W1 in the C-9939 Flipper Power Supply box; the jumper was erroneously omitted.
j. In the Flipper Power Supply, add a resistor symbol in parallel with C1 and C3 to ground; mark it as R1.
k. Add F2 above the 5 ASB fuse in the Flipper Power Supply.
l. Below the Flipper Power Supply, change the description, LEFT HIDEOUT RELAY, to LEFT HIDEOUT COIL. (The same change applies to the Right Hideout Relay designator; it should be "coil".) Add the word "RELAY" beside the two boxes (slightly below the coils) containing four short dark marks, which represent the relay terminals.
m. In the JUMPER CHART showing the 206 VAC jumper, change the lower connection from terminal 5 to terminal 3.
n. Correct the POWER SUPPLY circuitry for the terminals noted in the diagram below, by deleting the original connections and replacing them, as shown: |



- 50
- In the CPU Board diagram, the 1J22 connector is incorrectly shown as a 20-pin unit; it is actually a 26-pin connector.
 - Transistors for Special Solenoids (SS) shown near connector 1J19 should be: Q73 for SS 3; Q71 for SS 2; Q69 for SS 4; Q75 for SS 1; Q77 for SS 5; Q79 for SS 6.
 - In the D-8345-541 Power Supply diagram: Pin 3J6-2 should be labelled -12V UNREG; pin 3J6-6 should be +12V UNREG; pins 3J5-2 and 3J5-5 should be labelled NC; terminal 1 of GEN. ILLUM. should have YEL-WHT as the wire color; wire color on pin 3J3-4 should be RED-WHT.
 - In Flipper Power Supply diagram: Wire colors on connector 15J1 should all be BLK-YEL; pin 15J2-8 should be labelled GND, not NC; wire colors on pins 15J3-1 and -2 should be BLU-YEL; color on 15J3-5 should be VIO-YEL; color on 15J3-6 should be GRY-YEL.

Amendments and Additions to the *HIGH SPEED* Instruction Manual (Continued)

Pen and Ink Amendments/Additions (Continued)

- | <i>Page</i> | <i>Information</i> |
|-------------|--|
| 51 | <p>a. On the diagram, next to item 116, the number of the referenced note is #19.</p> <p>b. Add W12 and W13 (220Ω) to the jumpers listed. Note that these are proper for pinball games using System 11.</p> <p>c. Add part number for U15 and U24, I.C., 6808, Microprocessor: 5400-09250-00. Note that part numbers for U21, U22, U26, and U27 (Game and Sound ROMs) appear in the ROM Summary of Section 1.</p> |
| 56 | <p>a. Change 90VAC in upper left area to 88.5 VAC. Delete the word "LOGIC" at pin 3J5-1; it is a ground terminal, but not a logic ground.</p> |
| 22 | <p>In Pricing Table:</p> <p>a. USA & Canada: Change Std Setting 04 entry in col. 26 from 00 to 04.
Change Std Setting 02 entry in col. 26 from 00 to 04.</p> <p>b. West Germany: Delete top line, Std Setting 10, entirely. Change sixth line entry 00 in col. 24 to 10, making it Std Setting 10.
Change Std Setting 09 entry in col. 29 from 00 to 45.
Transpose values in col. 26 and 27 for Std Setting 11, to read: 11 03 06 15 05 00 00.
Transpose values in col. 26 and 27 for Std Setting 12, to read: 12 13 26 65 05 65 00.</p> <p>c. Belgium: Change col. 27 entry of 04 to 02 for all three lines of this portion of the chart.</p> |

Amendments and Additions to the *HIGH SPEED* Instruction Manual (Continued)

Copy Additions

1. PART SUBSTITUTION AFFECTING D-10877 MASTER DISPLAY BOARD (p. 41)

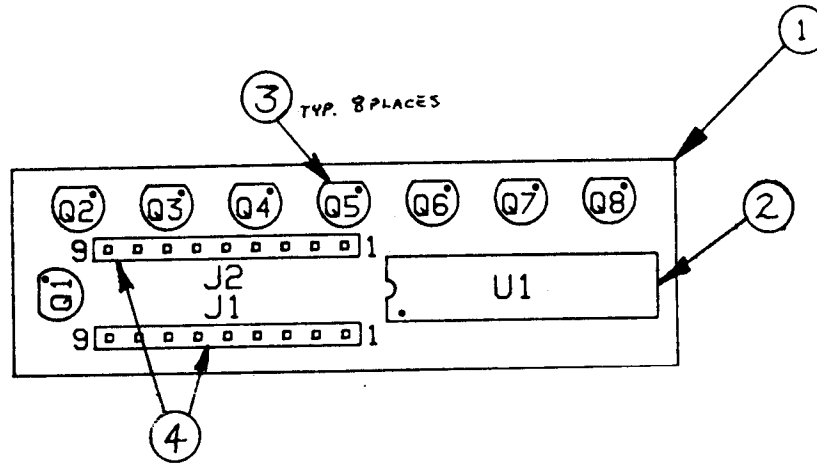
The following assembly may replace the UDN 7180A Cathode Segment Driver because of a temporary IC shortage:

Substitute H V Driver Board Assembly

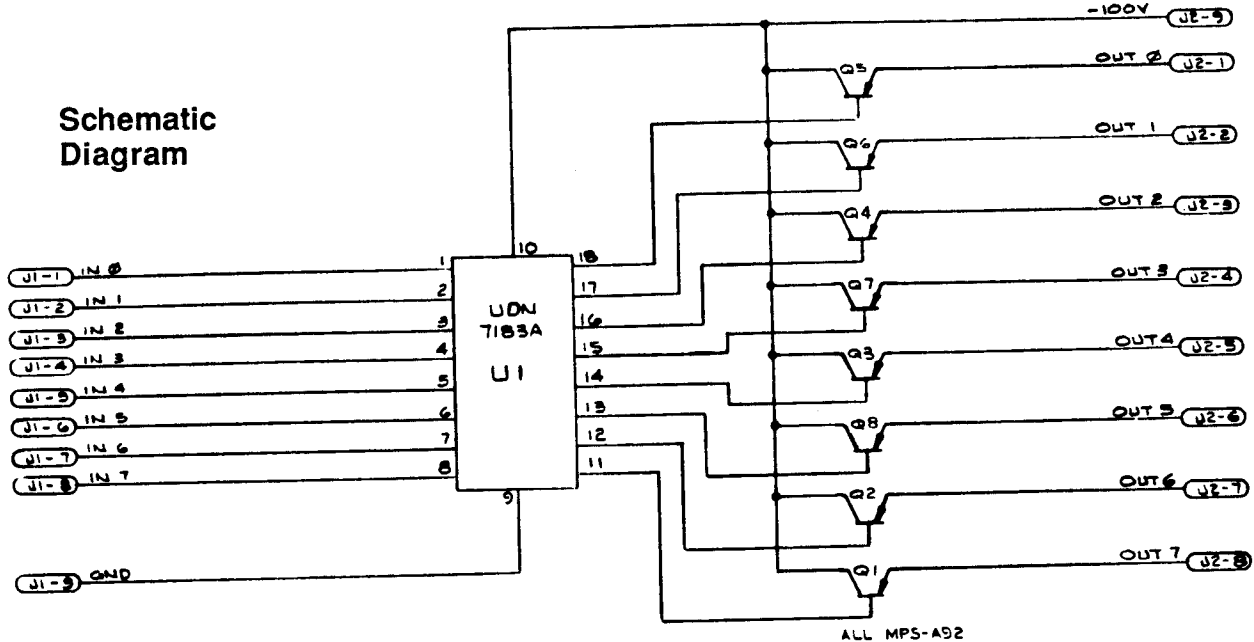
p/n C-11161

Item	Part No.	Designation	Description
1	5763-11076-00		Bare PC Board
2	5680-11075-00	U1	IC; 7183, Cathode Drive
3	5194-09217-00	Q1 Thru Q8	Transistor, MPS-A92
4	5791-11077-09	J1, J2	Header, 9-Pin

Circuit Board Diagram



Schematic Diagram



Amendments and Additions to the *HIGH SPEED* Instruction Manual (Continued)

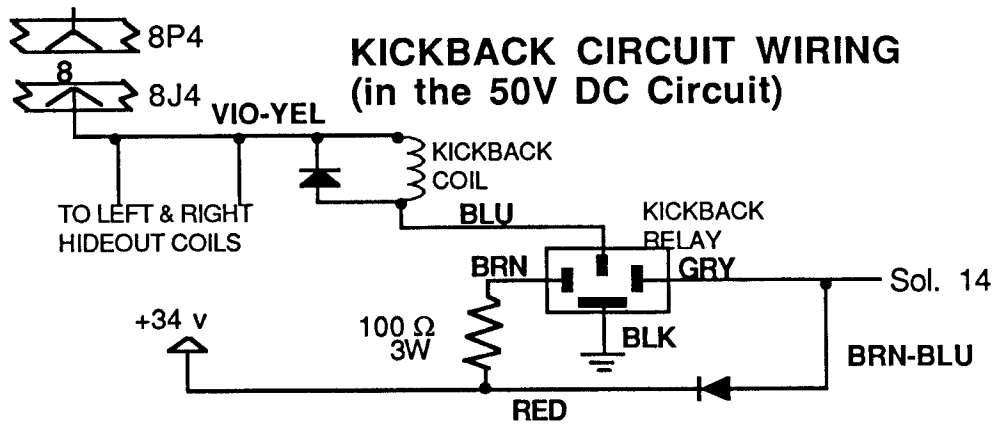
Copy Additions (Continued)

2. Add the following list of game parts in Section 2.

Backbox Cables

Part No.	Location or To-from Connections	Part No.	Location or To-from Connections
5795-10938-22	CPU Bd. to Master Display Board	5795-09453-00	Master Display Bd. to Player 4 Display
5795-10937-06	CPU Bd. to Background Sound Board	5795-09453-00	Master Display Bd. to Ball In Play/Match
5795-10868-14	Master Display Bd. to Player 1 Display	H-8527	Volume Control Cable (Display)
5795-10868-14	Master Display Bd. to Player 2 Display	H-11035	CPU Bd. to Speaker (backbox & cabinet)
5795-09453-00	Master Display Bd. to Player 3 Display		

3. Add the following circuit diagram of the Outlane Kickback to the Power Wiring Diagram appearing on page 47.



4. The following assembly replaces the black relay used in the Left and Right Hideout Kicker and the Outlane Kickback circuits.

Relay Snubber Assembly p/n B-11160

Item	Part No.	Description	Item	Part No.	Description
1	A-7438-5	5-Lug Terminal Strip Assy	6	5040-09070-00	Capacitor 100 μ f, 100 v
2	HW-30018-0	Wire 18 AWG Black	7	5070-06258-00	Diode 1N4001
3	HW-30018-6	Wire 18 AWG Blue	8	5070-08785-00	Diode 1N4003
4	01-6968	Relay Holder	9	5580-09384-00	Relay 2-Pole, 24 VDC 13 A
5	5010-09787-00	Resistor 150 Ω , 1/2 W			

