



Driving Force

(Pac-Man conversion)

MANUAL

IMPORTANT NOTICE

ADDITION TO INSTRUCTIONS :-

CLAUSE 6 PAGE 2 : ADD :- CUT AND LIFT PIN #5 OF IC 4 C.

FUTURE INSTRUCTIONS WILL INCLUDE THIS.

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DRIVING FORCE INSTRUCTIONS SERIES 2 EXPANSION BOARD.

WE STRONGLY RECOMMEND THAT YOU COMPLETELY CLEAN AND REPAINT YOUR PAC-MAN CABINET YELLOW. IT IS NECESSARY TO UNDERCOAT THE CABINET FIRST OR THE SIDE DECALS WILL SHOW THROUGH. WE USE AND RECOMMEND ZINSSER BRAND 3 PURPOSE BIN PRIMER SEALER. IT PRIMES WHITE AND DRIES IN ABOUT 25 MINUTES.

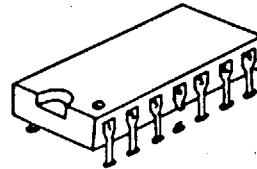
PART 1.

1. IT IS ESSENTIAL THAT THE PAC-MAN LOGIC BOARD BE TESTED PRIOR TO COMMENCEMENT OF THIS CONVERSION. SWITCH PAC-MAN MACHINE ON AND PLAY AT LEAST TWO GAMES TO INSURE THAT ALL FUNCTIONS OF THE LOGIC BOARD ARE WORKING CORRECTLY.
2. REMOVE LOGIC BOARD ASSEMBLY FROM THE CABINET AND PLACE COMPONENT SIDE UP ON A CLEAR WORK BENCH.
3. REMOVE V RAM ADDRESSER SUB BOARD FROM LOCATION 5S. THIS SUB BOARD MAY BE SECURED BY A PLASTIC TIE WRAP, IF SO SIMPLY CUT THE TIE WRAP.
4. REMOVE BUS CONTROLLER SUB BOARD AT LOCATION 6D. AGAIN IT MAY BE NECESSARY TO CUT A TIE WRAP.
5. REMOVE PAC-MAN ROMS AT LOCATIONS 6E;6F;6H;6J;5E and 5F.
6. REMOVE Z80 CPU FROM LOCATION 6B. THE FOLLOWING COMPONENTS, REMOVED FROM YOUR BOARD SHOULD BE STORED AWAY IN A SAFE PLACE FOR POSSIBLE FUTURE USE:-- Z80 CPU.(6B);PAC-MAN ROMS (6E,6F,6H,6J,5E,5F);V RAM ADDRESSER SUB BOARD (5S).
7. REMOVE NEW EXPANSION BOARD FROM PACKING BOX AND PLACE COMPONENT SIDE DOWN ON THE RIGHT HAND SIDE OF THE PAC-MAN LOGIC BOARD. CONNECT THE 40 PIN RIBBON CONNECTOR TO THE SOCKET AT 6B; AND THE 24 PIN RIBBON CONNECTOR TO THE SOCKET AT 5E.
8. REPLACE THE BUS CONTROLLER SUB BOARD INTO SOCKET AT 6D.
9. FOLD EXPANSION BOARD OVER THE PAC-MAN LOGIC BOARD AND CONNECT THE 28 PIN RIBBON CONNECTOR TO THE SOCKET AT 5S. THE EXPANSION BOARD IS HELD IN PLACE BY TWO SELF ADHESIVE POSTS. INSURE THAT THE LOGIC BOARD IS CLEAN SO THAT THEY CAN STICK.
10. WE SUGGEST THAT AT THIS POINT IN THE CONVERSION YOU REPLACE THE PAC-MAN LOGIC BOARD IN THE CABINET, REPLACE THE EDGE CONNECTOR AND SWITCH THE MACHINE ON. OBSERVE THE MONITOR TO SEE THAT THE FLASHING NAME "DRIVING FORCE" APPEARS AND A PAIR OF FLAGS ARE VISIBLE AT THE TOP OF THE SCREEN. IF THESE IMAGES ARE VISIBLE ON THE SCREEN YOU CAN SAFELY PROCEED TO PART 2 OF THESE INSTRUCTIONS. IF THE SCREEN DOES NOT DISPLAY THESE IMAGES REMOVE THE LOGIC BOARD AND RECHECK STEP BY STEP THE CONVERSION TO THIS POINT.

PART 2.

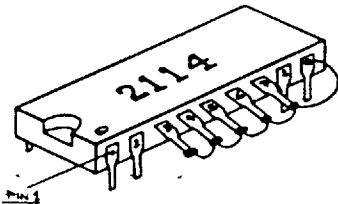
1. REMOVE BOARD ASSEMBLY TO A CLEAR WORK BENCH.
2. REMOVE RIBBON CONNECTORS FROM THE NEW EXPANSION BOARD AND REMOVE EXPANSION BOARD.
3. REMOVE BUS CONTROLLER SUB BOARD AT 6D.
4. THE NEW DRIVING FORCE GAME TAKES ADVANTAGE OF NEW TECHNOLOGY NOT FOUND IN THE ORIGINAL PAC-MAN BOARD. IN ORDER TO INCREASE THE VIDEO AND SOUND QUALITY OF THE PAC-MAN BOARD THE FOLLOWING MODIFICATIONS ARE REQUIRED.
5. REMOVE COLOR ROMS AT LOCATIONS 7F and 4A. (store these with the Z80 and other Roms for future use)
6. CUT AND LIFT PIN #4 OF IC 3N.

IC 3N



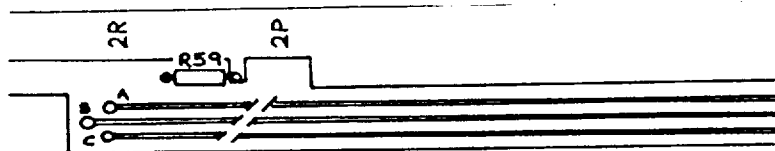
7. CONNECT WIRE FROM LIFTED PIN #4 IC 3N TO PIN #2 OF IC 2P.
8. REMOVE RAM CHIPS AT LOCATIONS 4P AND 4L.
9. LIFT PINS 3,4,5,6,7 OF BOTH RAM CHIPS AND REPLACE IC'S INTO SOCKETS 4P and 4L SO THAT THE LIFTED PINS DO NOT GO BACK INTO THE SOCKET. ON EACH RAM CHIP LINK TOGETHER THE BENT OUT PINS 3,4,5,6 and 7 to pin 9 WITH A PIECE OF WIRE. SEE ILLUSTRATION BELOW.

IC 4P
&
IC 4L

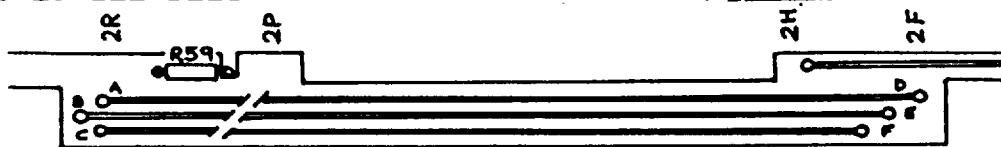


INSURE THAT THE WIRE CONNECTING STRAP DOES NOT SHORT OUT ON PIN #8.

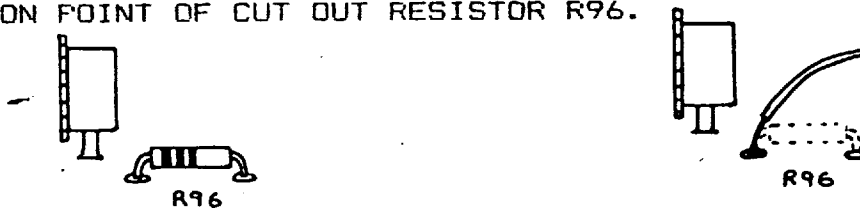
10. CONNECT GREEN WIRE FROM PIN 1 OF MOLEX PIN STRIP TO PAD B.
B. CONNECT BLUE WIRE FROM PIN 2 OF MOLEX PIN STRIP TO PAD C.
CONNECT RED WIRE FROM PIN 3 OF MOLEX PIN STRIP TO PAD A. SEE BELOW.



11. CONNECT ORANGE WIRE FROM PIN 4 OF THE MOLEX PIN STRIP TO PAD F. CONNECT BROWN WIRE FROM PIN 5 OF THE MOLEX PIN STRIP TO PAD D. CONNECT GREY WIRE FROM PIN 6 OF THE MOLEX PIN STRIP TO PAD E. SEE BELOW.



12. CUT OUR RESISTOR R 96 NEAR VOLUME CONTROLL. CONNECT PURPLE WIRE FROM PIN 7 OF THE MOLEX PIN STRIP TO INNER CONNECTION POINT OF CUT OUT RESISTOR R96.



13. CONNECT YELLOW WIRE FROM PIN 8 OF THE MOLEX PIN STRIP TO PIN 7 OF IC 4B. CONNECT WHITE WIRE FROM PIN 9 OF THE MOLEX PIN STRIP TO PIN 6 OF IC 4B. CONNECT BLACK WIRE FROM PIN 10 OF THE MOLEX PIN STRIP TO PIN 5 OF IC 4C.

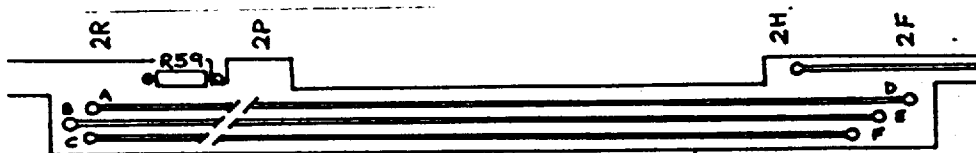
14. INSERT NEW COLOR PROM IC 82S126N IN SOCKET AT 4A.

15. INSERT NEW COLOR PROM IC 82S123N IN SOCKET AT 7F.

16. REFIT BUS CONTROLLER SUB BOARD AT LOCATION 6D.

17. INSTALL EXPANSION BOARD ONTO LOGIC BOARD AND CONNECT 40 PIN, 24 PIN AND 28 PIN RIBBON CONNECTORS TO THEIR RESPECTIVE SOCKETS.

18. USING A SHARP KNIFE CUT THE 3 TRACKS NEAR R59 AS ILLUSTRATED BELOW.



19. THE LOGIC BOARD ASSEMBLY CAN NOW BE REINSTALLED INTO THE CABINET.

20. THE KIT COMES COMPLETE WITH A NEW FRONT CONTROLL PANEL. IT IS NECESSARY TO REMOVE THE HARNESS ASSEMBLY FROM THE PAC-MAN CONTROLL PANEL AND INSTALL IT ON THE NEW CONTROLL PANEL. THE JOY STICK POSITIONS "UP" AND "DOWN" ARE NOT USED IN THIS GAME. FOR LEFT HANDED PLAYERS BRAKE AND ACCELERATOR BUTTONS HAVE BEEN INSTALLED ON THE LEFT HAND SIDE OF THE NEW CONTROLL PANEL. IT IS NECESSARY TO RUN WIRES TO THESE COMMON TO THE RIGHT HAND BUTTONS. THE ACCELERATE BUTTON IS CONNECTED TO THE ONE PLAYER WIRE AND THE BRAKE BUTTON IS CONNECTED TO THE TWO PLAYER BUTTON. LEFT AND RIGHT CONTROLLS REMAIN IDENTICAL.

21. REMOVE THE PAC-MAN MONITOR GLASS AND INSERT THE NEW "DRIVING FORCE" MONITOR GLASS. INSTALL THE NEW CONTROLL PANEL.

22. REMOVE THE PAC-MAN HEADER PANEL AND INSTALL THE NEW "DRIVING FORCE" HEADER PANEL.

23. WHEN THE CABINET HAS BEEN CLEANED AND REPAINTED THE TWO SIDE DECALS CAN BE APPLIED TO COMPLETE THE CONVERSION.