ATARI

FIREFOX AMPLIFONE RASTER MODIFICATION

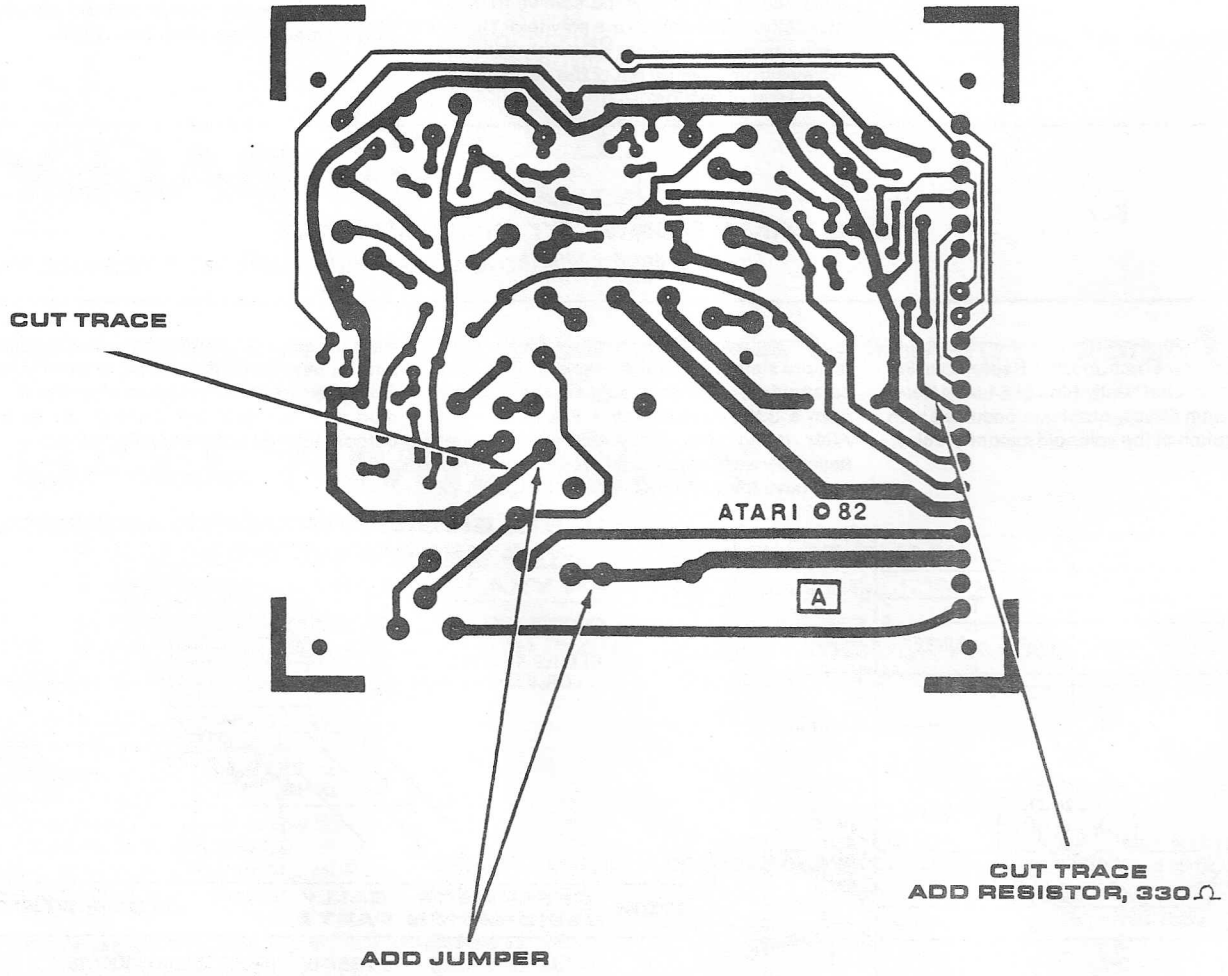
Step 1 is mandatory and must be done immediately.
Steps 2 through 6 provide increased protection to the deflection board and should be installed by a qualified technician as soon as possible, but especially if the game fails.

1. Neck Board
Cut the trace between the pad at CRT socket pin 5 and the nearest pad. Install an insulated jumper (1000 volts or better insulation) between pad at CRT socket pin 5 and either of the pads at spade lug J9. Use a number 20 wire.

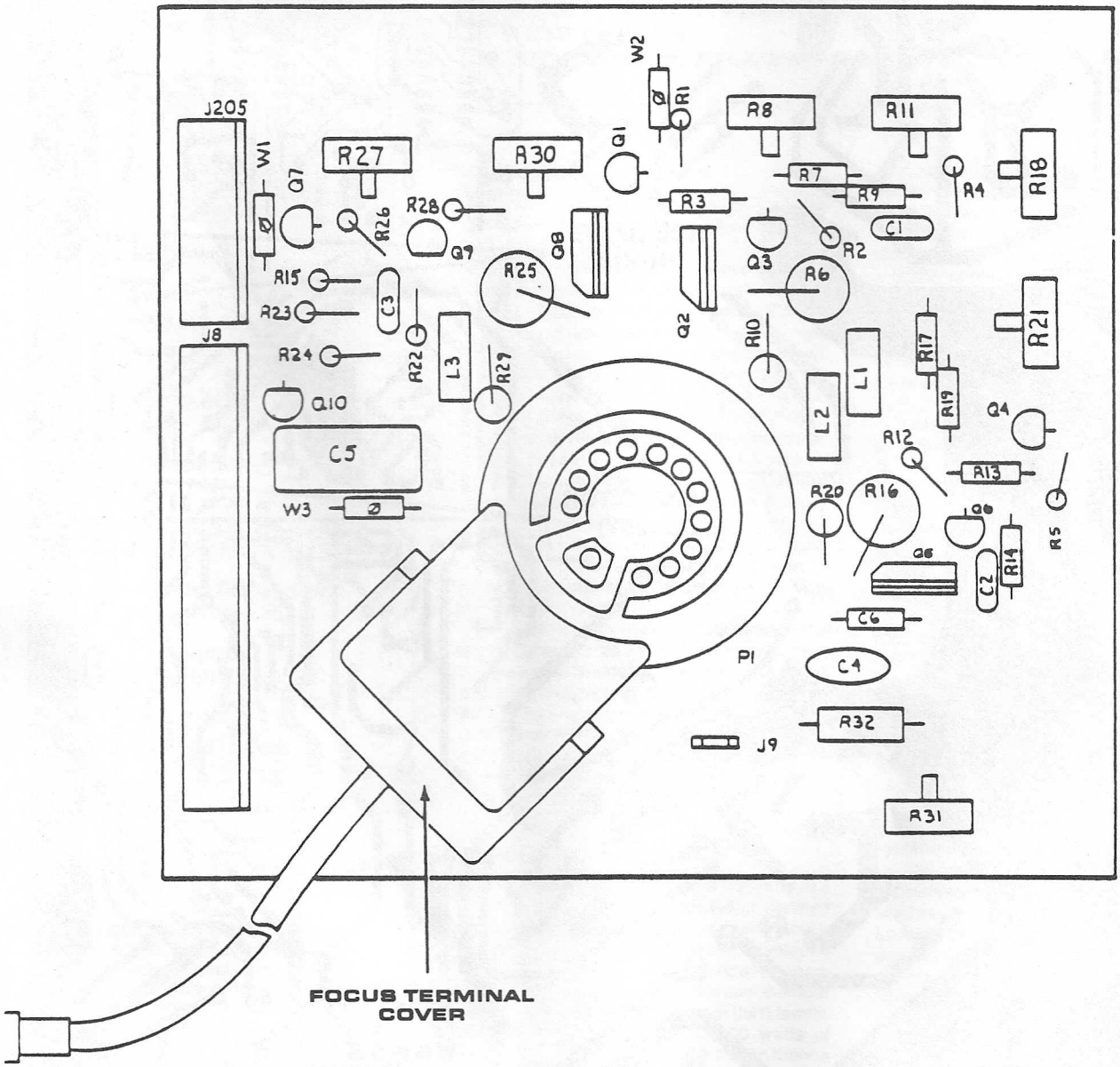
2. Cut the trace between connector J8 pin 9 pad and the base pad of Q10. Install a 330 ohm, ±5%, ¼ watt, resistor between the base of Q10 and the connector J8 pin 9 pad.

CAUTION
To prevent arcing, it is absolutely necessary to use a carbon-composition resistor in the following step.

3. Remove the focus terminal cover from the CRT socket and unsolder the focus lead from the terminal. Solder a 22 megohm, ±5%, ½ watt carbon-composition resistor to the terminal with the end flush with the terminal and resistor parallel to the board. Solder the focus lead flush with the other end of the resistor, and trim the resistor lead. Route the focus lead back to the exit groove and replace the cover.



NECK PCB ASSEMBLY



4. Deflection Board

Install a 1N751A zener diode (5.1 V) to the vertical sync input, anode to ground, as follows:

a. Locate the first pad connected to J1 pin 5 on the trace or circuit side of the board. Note: PLL board is installed in place of J1.

b. Locate the pad going to ground near J1 pin 6, between pin 6 and R10.

c. Install the zener diode (anode to ground) between these two pads on the circuit side of the PCB.

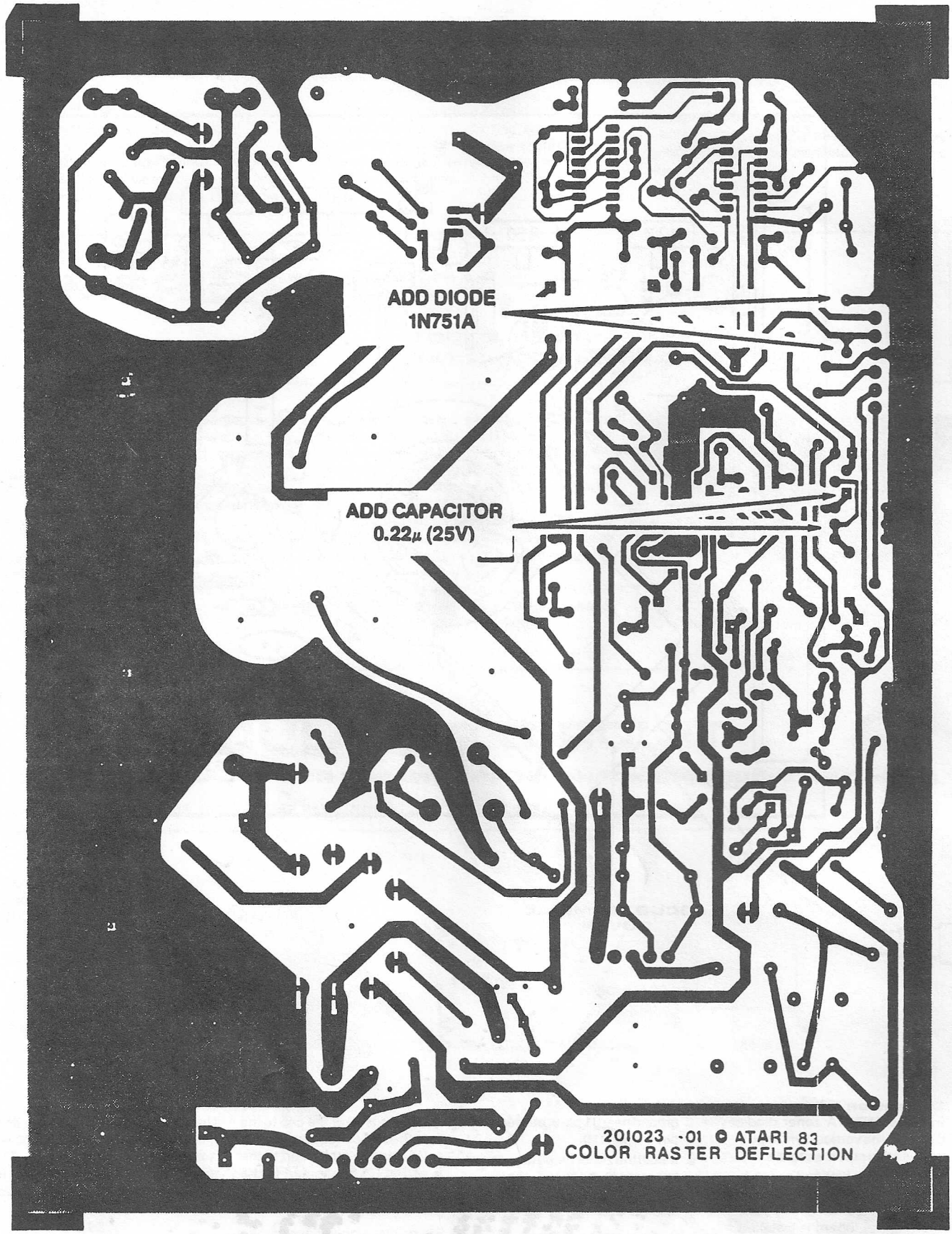
5. a. Remove C5 (0.1 uF) axial cap.

b. Install a 0.22 uF (25 V) axial cap between the cathode and gate of Q4 (MCR101), soldering one lead of the cap to the cathode pad (square pad) of Q4 and the other lead to the pad of C5 connected to the gate of Q4. Install the cap on the circuit side of the PCB.

6. Route the high-voltage anode lead away from the deflection board, and secure it with a wire tie wrap.

NOTE:

Upright *Firefox* games built after game serial number UR00802 will not need this modification. This modification has already been incorporated on all sitdown *Firefox* games.


ADD DIODE
1N751A
ADD CAPACITOR
0.22μ (25V)
201023 -01 © ATARI 83
COLOR RASTER DEFLECTION