Figure 19.2 "You can help liberate us!"

# Barbie / G.I. JOE HOME SURGERY INSTRUCTIONS

You Will Need

Teen Talk Barbie Doll
12" talking G.I. Joe
soldering iron
electric solder
Epoxy (not fast drying)
2 sharp screwdrivers
1 coping or hack saw
12" electrical wire
hot glue (or similar)
switch (see step 12)

1. To open Barbie, insert a screwdriver firmly into the joint at the base of the spine. With a quick jerk, snap the screwdriver down towards the buttocks. Pry the backplate off, working up from the waist. Once the back is loosened, grab it with your fingers and snap it straight off with a firm yank. Do not twist. Remove head, arms, and legs. Gently loosen circuit board. Break off tab holding speaker in place. Remove speaker/circuit board.
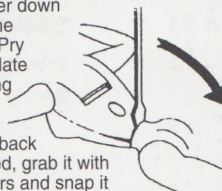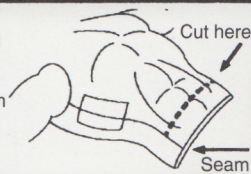
2. Using saw, sever battery contacts from rest of circuit board as shown. Battery contacts go back into doll.
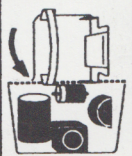
Cut at dotted line

3. To open G.I. Joe, remove batteries and pop off head. Using saw, make incision across abdomen from seam to seam. **Be careful not to cut wires underneath**.

Cut here

Seam

4. Start prying front/back plates apart at neck and work down towards shoulders. **Careful – neck is fragile**. Once shoulders are split, insert screwdrivers into joints where arms meet torso. Pry torso apart from both arms simultaneously.
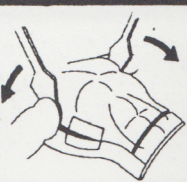
5. Cut bracket holding Joe's circuit board in place and loosen board, speaker, and switch.

6. Locate power wires (red & black) running from Joe to contacts on circuit board. Heat contacts with soldering iron. Remove wires from board but leave them attached to Joe. Solder two similar replacement wires onto circuit board.
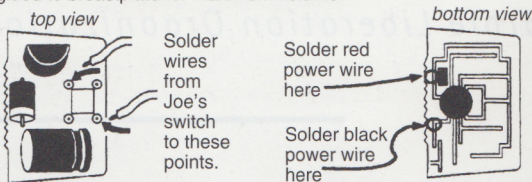
Power wires

7. Locate the switch on Barbie's circuit board. Heat the four solder points and remove. A solder-removing bulb may help.
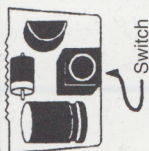
Switch

8. When removing Joe's switch, make a note of where the switch wires meet the circuit board. Heat contacts and remove switch.

9. Wire Joe's power and switch to Barbie's circuit board as shown. Install board, speaker, and switch back into Joe. Hot glue works well to anchor everything in place. Speaker should be firmly glued to breastplate for maximum volume.

top view

Solder wires from Joe's switch to these points.

bottom view

Solder red power wire here

Solder black power wire here

10. **IMPORTANT**: When running the Barbie circuit board in Joe, use only three batteries. You may want to re-wire the battery contacts, or substitute something to take up the extra space. A filed-down conductive nail wrapped in tape works well as a pseudo-battery.

11. There are two options for re-installing Barbie's switch. The first (and more difficult) is to use a small, stiff, non-conductive scrap of circuit board, plastic or similar material. Mount the switch on the board, and sandwich it between the board and the button on Barbie's back. Glue the board to the posts on Barbie's back. If done carefully, Barbie need never know she's been under the knife.

12. The second option is to use a small momentary contact switch (Radio Shack Cat. No. 275-1571B). Mount it in place of the button in Barbie's back. It's easier and more permanent, although Barbie no longer looks like everyone else.
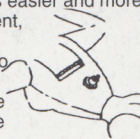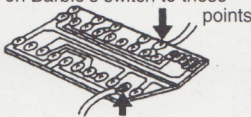
13. Unfortunately, Joe's circuit board will not fit properly into Barbie without modification. First, de-solder and remove this capacitor.
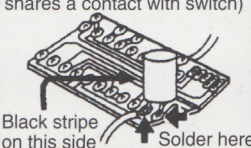
14. Next, cut down board by removing shaded areas shown below. *(bottom view)*

Remove
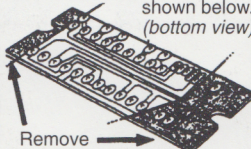
15. Cut two 2" pieces of wire. Solder them from the contacts on Barbie's switch to these points.

16. Re-solder capacitor as shown. (Note: capacitor shares a contact with switch)

Black stripe on this side

Solder here

17. Cut any additional unused space off the board. Solder the two wires from step 6 to Barbie's battery contacts.

18. Fitting the board into Barbie is tricky. You may need to bend the capacitors or shave the posts in her chestplate. Before re-sealing Barbie or Joe, first make sure body parts fit together properly. Apply epoxy around rim of front and back plate. Quick-drying epoxy is not recommended, as it leaves little room for error. First insert both neck sections into the head, insert the arms and legs, then clamp the doll together. To touch up any scars or mistakes, use plumber's epoxy putty and model paint.
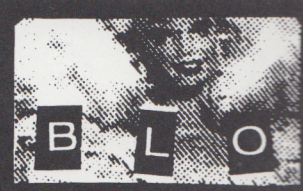
B L O

Figure 19.1 Home surgery instructions