

Apple II Family

Volume Two

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Monochrome Monitor

Technical Procedures

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Monochrome Monitor

Section 1 – Basics

❏ CONTENTS

1.2 Product Description

❑ PRODUCT DESCRIPTION

The Apple® Monochrome Monitor is a 12-inch CRT display monitor that is used with the Apple II family of computers. The power switch and the contrast control for the Monochrome Monitor are shown in Figure 1, #1. The LED on the front case shows that the power is on.

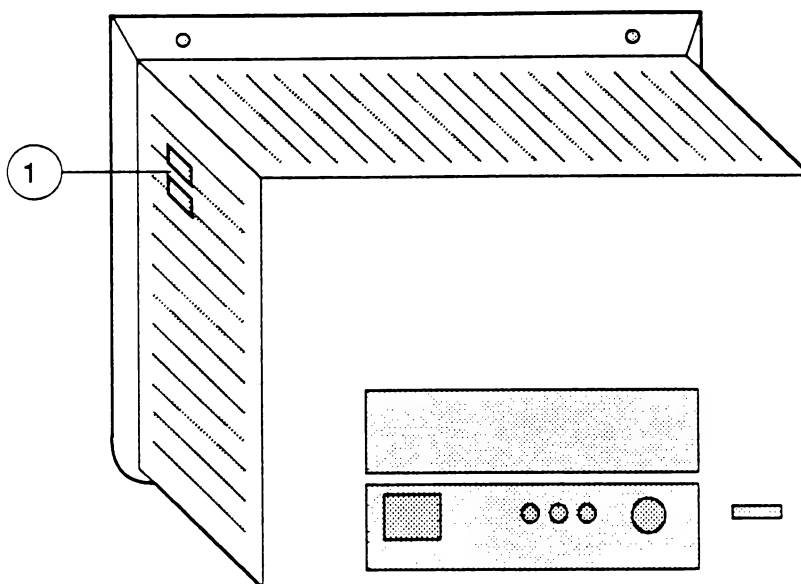


FIGURE 1

Figure 2 shows the international symbols that identify the other controls and sockets on the back.

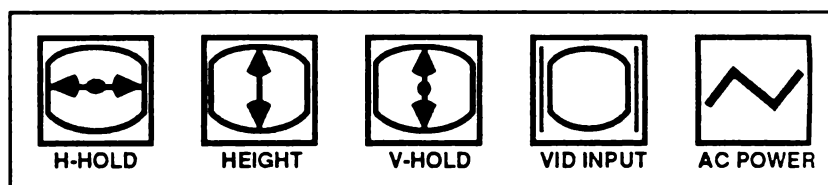


FIGURE 2

The Apple Monochrome Monitor contains a cathode-ray tube (CRT), which operates at very high voltages and contains a high vacuum. If cracked or broken, the CRT can implode (collapse into itself), scattering glass in all directions.

WARNING: Before working inside this monitor, read Section 8, CRT Safety, under the You Oughta Know tab.

Monochrome Monitor

Section 2 – Take-Apart

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Note: If a step is underlined, detailed instructions for that step can be found elsewhere in this section.

□ REAR COVER

WARNING: The Monochrome Monitor contains high voltage and a high-vacuum picture tube. To prevent serious personal injury and property damage, be sure you read and understand the safety precautions in Section 8, CRT Safety, under the You Oughta Know tab before you remove the back cover. **Failure to follow the safety rules could result in serious injury.**

Materials Required

Medium Phillips screwdriver

Remove

1. Turn off the monitor and disconnect the AC cord and video cable from the monitor.
2. Place the monitor on its face on a soft surface to avoid damage to the CRT screen.
3. Pull the front foot off the plastic tabs under the bezel.
4. Remove the four Phillips screws (Figure 1, #1).

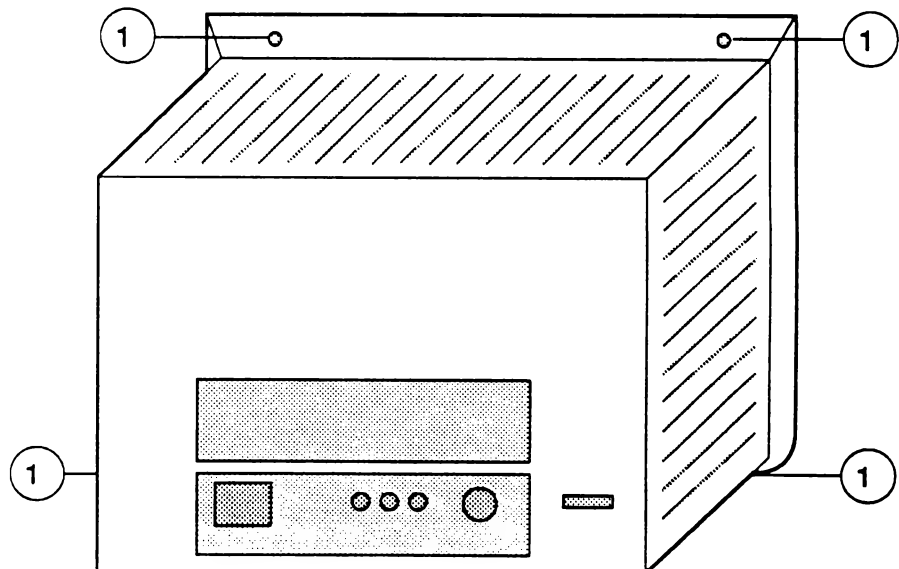


FIGURE 1

5. Set the monitor back on its feet, and turn it so that the on-off and brightness switches (Figure 2, #1) are toward you.

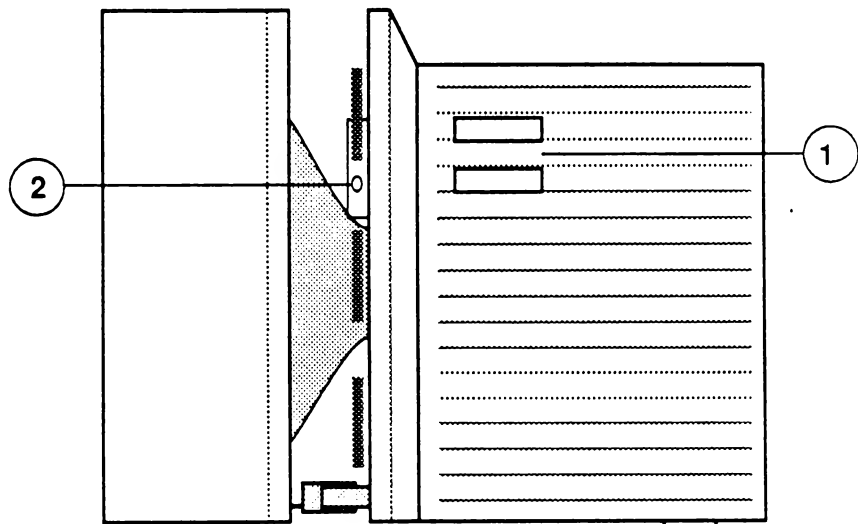


FIGURE 2

CAUTION: *In the next step, separate the rear cover and the bezel gently. The rear cover is attached to the logic board by the wires to the switch case. Both parts could be damaged if separated forcefully.*

6. Gently slide the rear cover an inch or two away from the bezel as shown in Figure 2.

WARNING: *Avoid touching the CRT in any way, because the CRT is still fully charged.*

7. To separate the bezel from the rear case, first remove the switch case by removing the screw that holds it to the side of the rear cover (Figure 2, #2), and sliding the case forward out of the rear cover.
8. Slide the rear cover completely away from the monitor.

Replace

1. Replace the switch case in the rear cover and fasten it with its screw.
2. With the monitor standing upright, slide the rear cover onto the bezel. If it is difficult to align them, check that the AC cord screw has not forced its mounting plate too far to the left, and that the metal rails of the main logic board assembly are inside the guides on the CRT mounting plate.
3. Replace the four Phillips screws on the rear cover.
4. Push the front foot onto the tabs on the bottom of the bezel.

□ DISCHARGING THE CATHODE-RAY TUBE (CRT)

Materials Required

Safety goggles
Foam pad (ungrounded)
Needlenose pliers
Alligator lead
New CRT discharge tool (part number **076-0381**)

WARNING: Before starting, read the safety precautions and the CRT discharge procedure in Section 8, CRT Safety, under the You Oughta Know tab. Alternative instructions for discharging the CRT using the older version of the discharge tool (and/or a screwdriver) are given in that section.

Discharge Procedure

1. **Remove your grounding wriststrap and jewelry and put on safety goggles before beginning!**
2. Remove the rear cover.
3. Set the monitor upright on the ungrounded foam pad, with the back facing you.
4. Attach the clip of the CRT discharge tool to any metal part of the chassis (Figure 3, #1).
5. Put one hand behind your back, and grasp the handle of the discharge tool with your other hand.

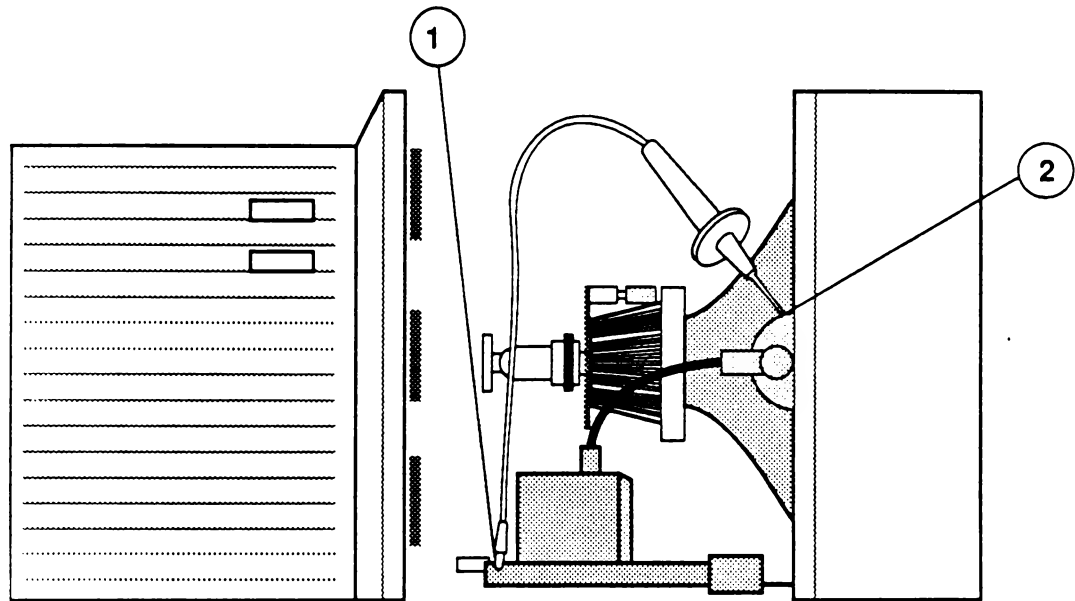


FIGURE 3

WARNING: Use only one hand when discharging the CRT to prevent forming a path of current through your body should your hand slip and touch the metal part of the discharge tool during the discharge procedure.

6. Hold the CRT discharge tool to the tube surface, and insert its probe under the anode cap (Figure 3, #2) until it touches the anode ring.
7. Remove the probe of the CRT discharge tool from under the anode cap and detach its clip from the metal chassis.

Note: A secondary charge could build up over time, even after you have discharged the CRT. To dissipate any residual charge, establish an ongoing ground by clipping one end of an alligator lead to the chassis frame and the other end to the anode ring or aperture.

Anode Cap

For some procedures, you may have to remove the anode cap. After you have discharged the CRT, peel back the anode cap until you can see the anode "ring" (or connector) at the center. Using needlenose pliers, compress the two prongs on the connector to free it from the anode aperture.

To replace the anode cap, press together the two prongs of the anode connector so that you can insert it into the aperture. Tug on the anode wire to make sure it is firmly seated, and then press down around the edges of the rubber anode cap to ensure a firm seal.

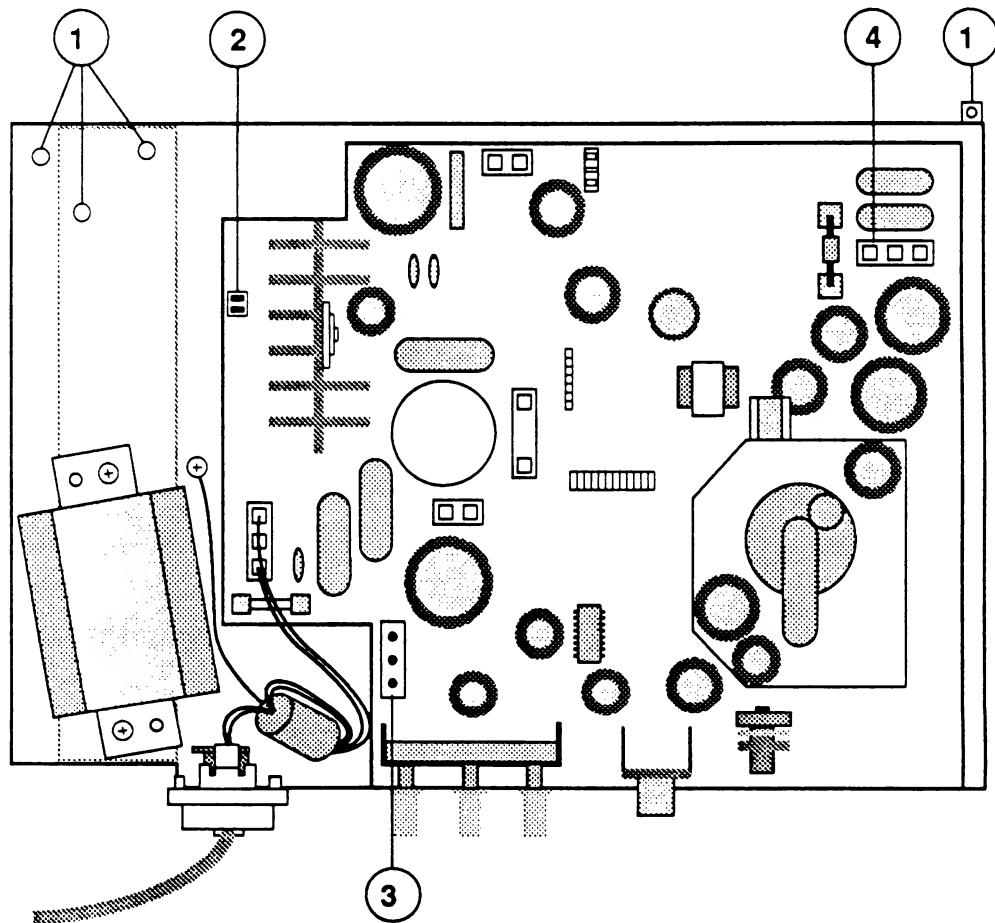


FIGURE 4

□ MAIN LOGIC BOARD, SWITCH CASE, AND AC CORD

Materials Required

Medium Phillips screwdriver (magnetic)
Diagonal cutters
Safety goggles

Remove

1. Turn off the monitor, disconnect the AC cord from the wall outlet, and disconnect the video cable from the monitor.
2. Remove the rear cover (including front foot).
3. Discharge the CRT.

WARNING: *In the next step, be careful not to hit the CRT with the screwdriver when removing or replacing the screw nearest the CRT.*

4. Unscrew the four screws (Figure 4, #1) that fasten the main logic board assembly to the CRT mounting plate.
5. Remove wires from the wire clips.
6. Pull the main logic board assembly away from the CRT to give yourself more room to access the connectors.
7. Disconnect the pink/white LED wire (P5) from its connector (Figure 4, #2).
8. Disconnect the green/yellow yoke wire (P3) from the main logic board (Figure 4, #3).
9. Disconnect the red/blue yoke wires (P4) from the board (Figure 4, #4).

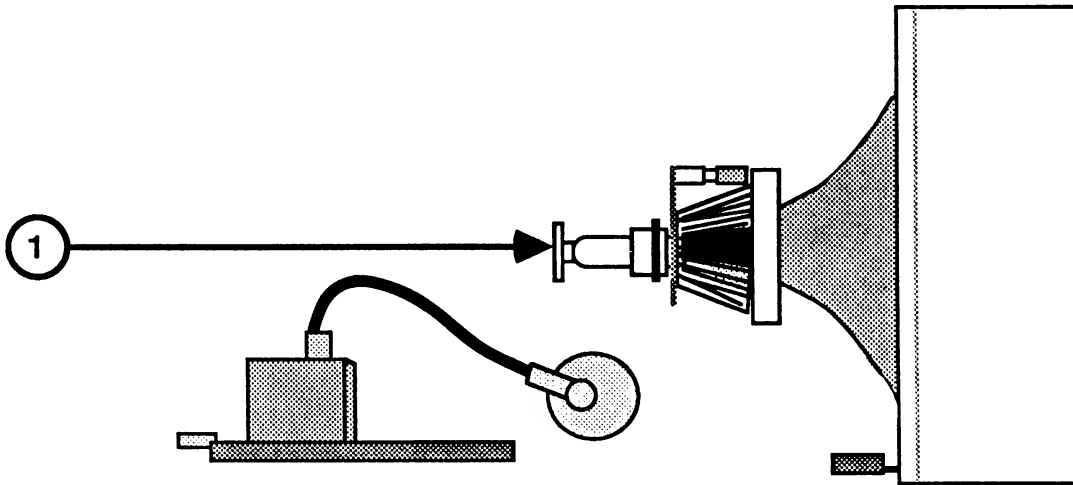


FIGURE 5

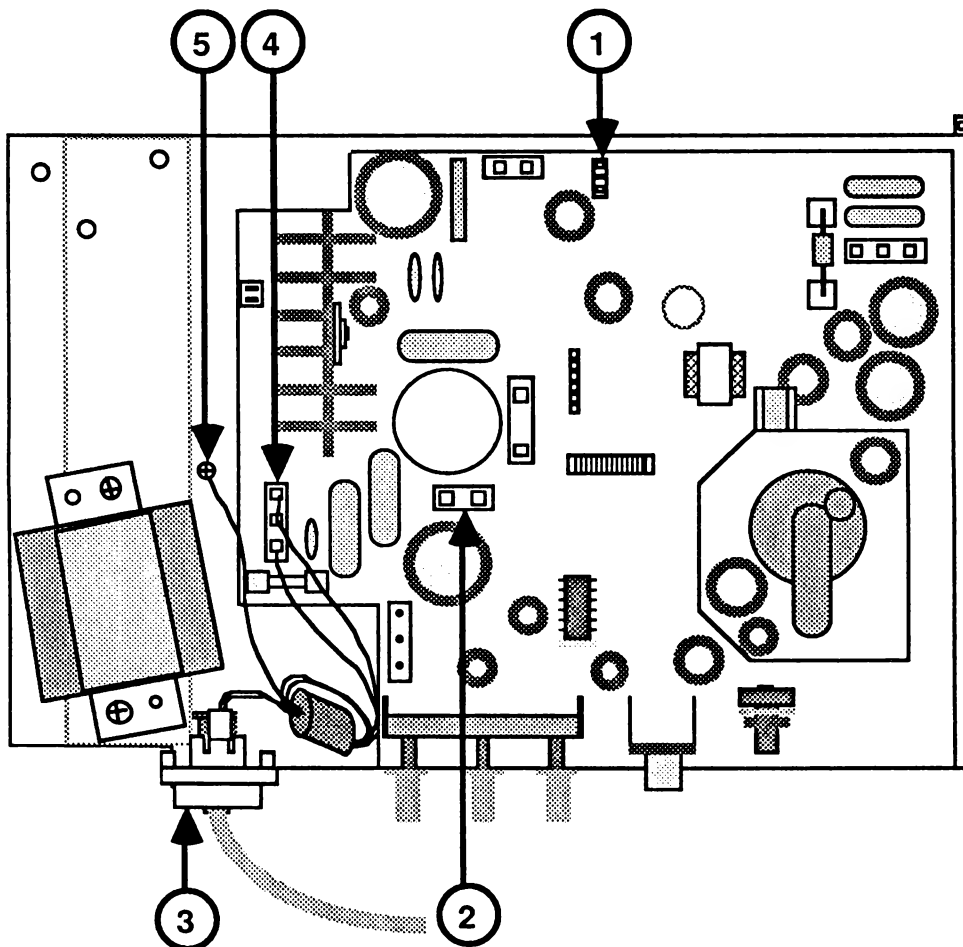


FIGURE 6

10. Gently pull the CRT socket board from the end of the CRT neck (Figure 5, #1).
11. Disconnect the gray ground wire (P6) from its connector on the CRT socket board. Move the logic board away from CRT.
12. The complete assembly consists of the board, the flyback transformer, and the metal chassis that holds them. The transformer is a separate part.

If you are only removing the main logic board so that you can change the LED or the CRT, leave the switch case, AC cord, and transformer attached to the board.

If you are replacing the main logic board, remove the adjustment knobs, the switch case, the AC cord, and the transformer before sending the main logic board assembly back to Apple.

Remove Switch Case and AC Cord

1. To remove the switch case from the board:
 - a) Disconnect the contrast control connector (P8) from the board (Figure 6, #1).
 - b) Disconnect the orange on-off control connector (P7) (Figure 6, #2).
2. To remove AC cord assembly from the board:
 - a) Unfasten the screw holding the AC cord mounting plate to the case and lift the mounting plate out of the case (Figure 6, #3).
 - b) Cut the tie holding the ferrite core to the case.
 - c) Unplug the AC input connector from the main logic board (Figure 6, #4).
 - d) Unfasten the green ground wire (Figure 6, #5).

Replace

1. Install the adjustment knobs on the board.
2. Replace the transformer.
3. Set the main logic board close to the CRT unit, with the edge near the tabs and channels it will slide into (Figure 7).

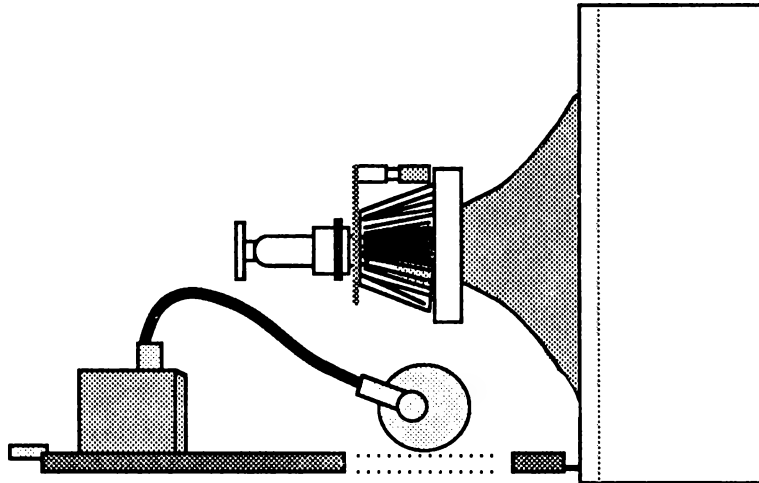


FIGURE 7

4. Reconnect the green/yellow yoke wire (P3) at J3 (Figure 8, #1).
5. Connect the red/blue yoke wire (P4) at J4 (Figure 8, #2).
6. Connect the LED wire at J5 (Figure 8, #3).
7. Connect the contrast control cable at J8 (Figure 8, #4).
8. Connect the orange on-off control wire to J7 (Figure 8, #5).

9. Slide the leading edges of the main logic board assembly carefully inside the metal channels in the CRT mounting plate. Push the edge of the assembly into the tabs in the CRT mounting plate.

WARNING: Be careful not to hit the CRT with the screwdriver when replacing or removing the screw closest to the CRT.

10. Fasten the four screws holding the logic board assembly to the CRT mounting plate (Figure 8, #6).
11. Connect the gray ground lead from the CRT grounding wire to J6 on the CRT socket board.
12. Replace the CRT socket board on the neck of the CRT.

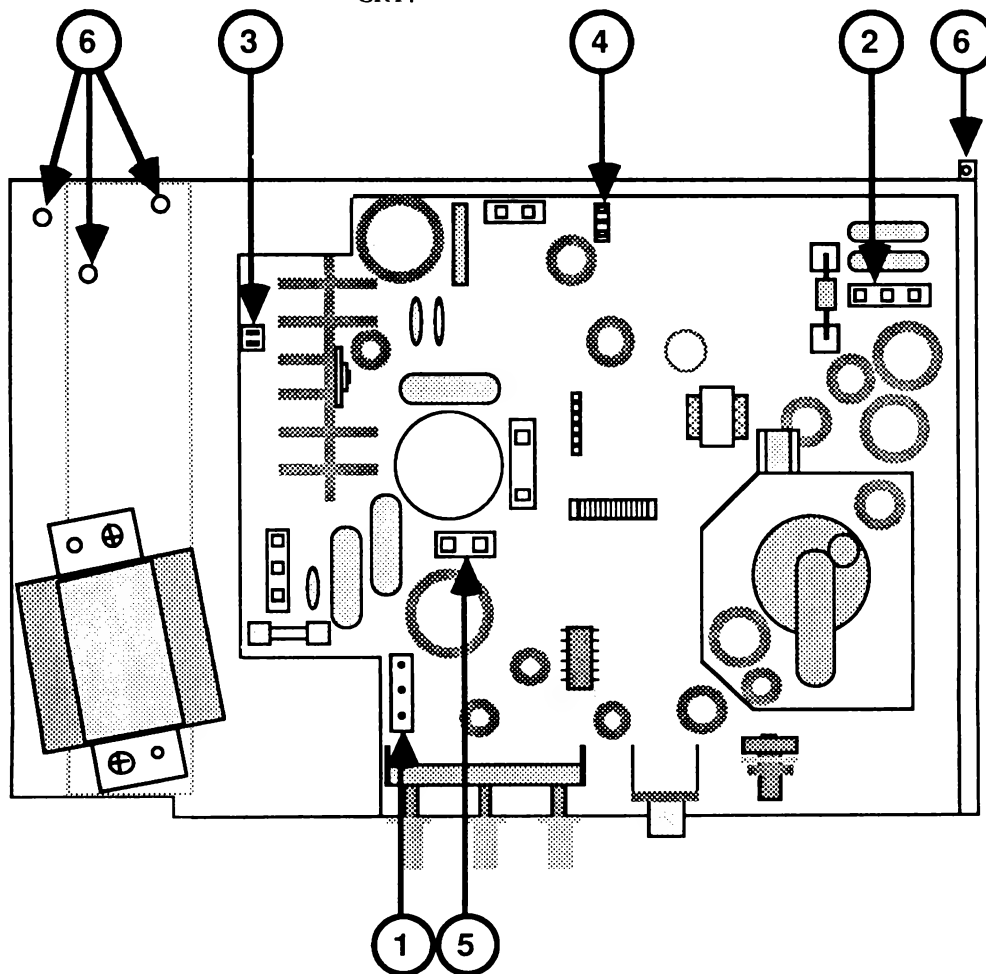


FIGURE 8

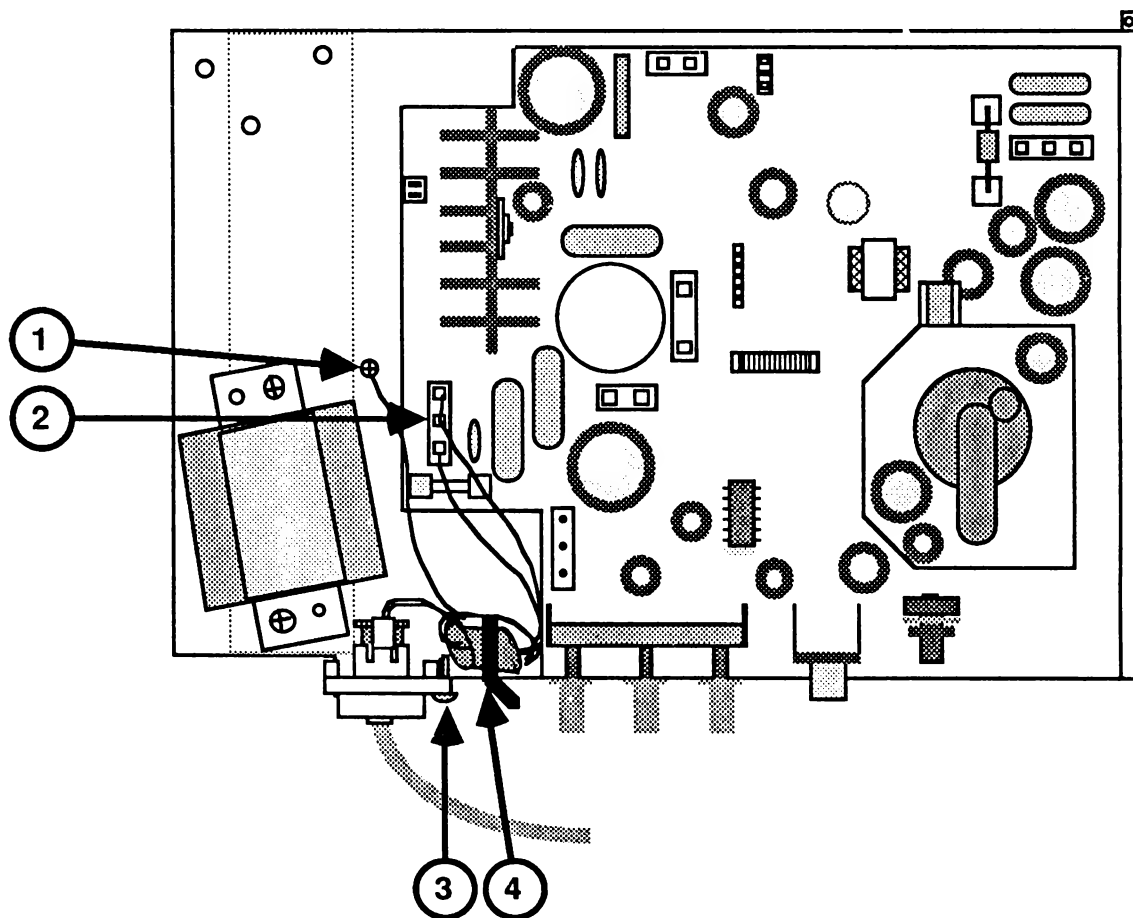


FIGURE 9

WARNING: Reattach the ground wire before making any tests involving power!

13. To reattach the AC cord:

- a) Attach the ground wire to the metal chassis near the transformer (Figure 9, #1).
- b) Plug the connector into the logic board (Figure 9, #2).
- c) Position the plug in back edge of case, and fasten the screw (Figure 9, #3).
- d) Fasten a piece of cable tie around the ferrite core, through the hole in the back edge of the case (Figure 9, #4).

14. Replace wires and cables in plastic clips.

15. If you are finished working inside the case, reconnect the anode cap to the anode of the CRT, making sure that both metal clips are in correctly.

16. To test that connectors P3 and P4 are correctly attached, hook up the monitor and computer, plug them in, and turn them on.

- a) If the image is upside down, turn the computer off and disconnect it. Discharge the CRT. Reverse connector P3.
- b) If the image is reversed, left to right, turn the computer off and disconnect it. Discharge the CRT. Reverse connector P4.

17. Replace the rear cover (includes switch case).

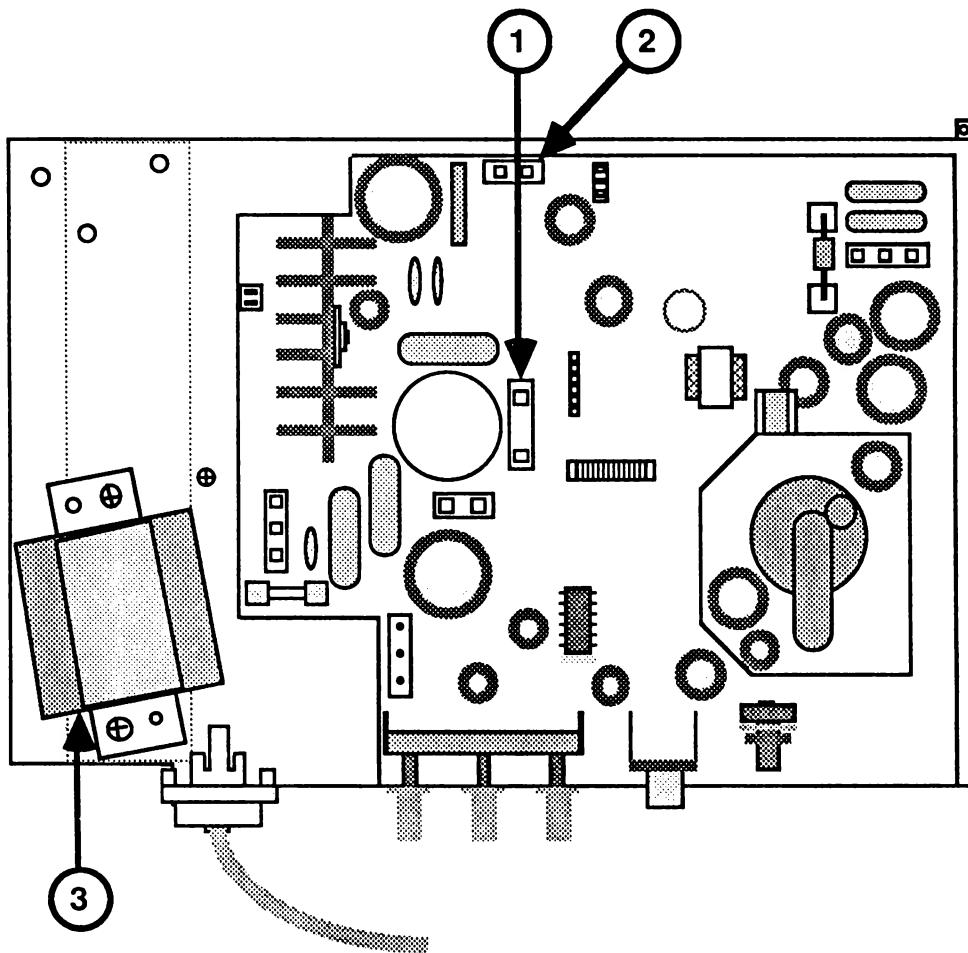


FIGURE 10

❑ TRANSFORMER

Materials Required

Medium Phillips screwdriver (magnetic)
Safety goggles

Remove

1. Remove the rear cover.
2. Discharge the CRT.
3. Remove the main logic board.
4. Disconnect the black and white wires' connector (P1) (Figure 10, #1). (Do not press hard on the board.)
5. Disconnect the blue wires' connector (P2) (Figure 10, #2).
6. Remove the mounting screws for the transformer (Figure 10, #3).
7. Remove the transformer from the main logic board.

Replace

1. Connect P1 at J1 (Figure 10, #1).
2. Connect P2 at J2 (Figure 10, #2).
3. Screw the transformer to the metal chassis.
4. Replace the main logic board.
5. If you are finished working inside the case, reconnect the anode cap to the anode of the CRT, making sure that both metal clips are in correctly.
6. Replace the rear cover.

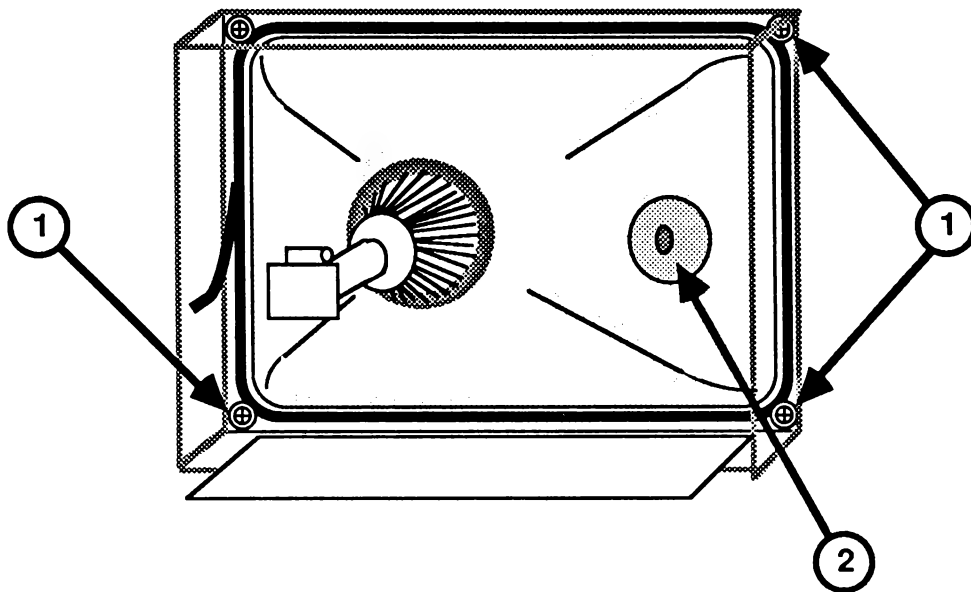


FIGURE 11

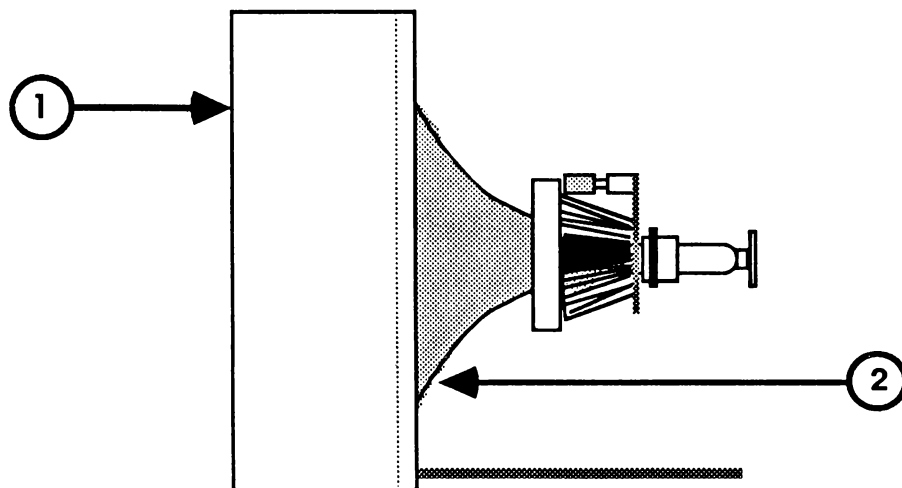


FIGURE 12

□ CATHODE-RAY TUBE (CRT)

You may have to flex the monitor case somewhat as you slide the CRT out. This flexing is necessary to allow the rim of the CRT to pass the reinforcing bar on the bottom of the case. If you flex the case, do not let the CRT rim strike the bar.

Materials Required

Medium Phillips screwdriver (magnetic tip)

Remove

1. Turn off the monitor, disconnect the AC cord from the wall outlet, and disconnect the video cable from the monitor.
2. Remove the rear cover.
3. Discharge the CRT.
4. Remove the main logic board.
5. Place the CRT face-down on a soft surface. Remove the mounting screws (Figure 11, #1) from the four corners of the CRT. Avoid touching the anode opening (Figure 11, #2).
6. Stand the monitor upright and support it with both hands (Figure 12, #1 and #2).
7. Tip the CRT so that its weight shifts onto your hand. The CRT mounting plate may also slip out under your hand.
8. Lay the bezel flat and put the CRT down safely.

WARNING: *If you intend to dispose of the CRT, refer to "Disposing of the Cathode-Ray Tube" in Section 8, CRT Safety, under the You Oughta Know tab.*

Replace

If the ground wire installed on the new CRT comes off, look at the old CRT to see how to replace it.

1. Place the bezel flat. Slide the edge of the CRT mounting plate into the slots in the front of the case.
2. Push the four rubber mounting feet for the CRT on the spikes in the corners. Fasten with contact cement, if necessary.

WARNING: *Do not force the rim of the CRT past the reinforcement bar.*

3. Holding the CRT in both hands, tip it slightly to slide its top edge under the mounting brackets.
4. Rest the top edge of the tube on its supports, then slip the rest of the CRT assembly into the case. It may be necessary to flex the case slightly.
5. With CRT still face down, replace the screws.
6. Replace the main logic board.
7. Replace the rear cover.

□ FUSE

Materials Required

Small plastic flatblade screwdriver
Safety goggles

Remove

1. Unplug the AC cord.
2. Remove the rear cover.
3. Discharge the CRT.
4. If the wire inside the fuse is broken, remove the fuse. Insert a plastic adjustment tool or small plastic screwdriver under one metal end and gently pry up until you can pull the fuse out with your fingers.

Replace

1. Be sure you have the correct fuse.
2. Gently press the fuse into the clamp.
3. If you have finished working inside the case, reattach the anode cap.
4. Replace the rear cover.

❑ POWER SWITCH

Materials Required

Medium Phillips screwdriver
Safety goggles

Remove

1. Remove the rear cover and the switch case.
2. Discharge the CRT.
3. Remove the four screws holding the main logic board assembly to the CRT mounting plate.
4. Back the main logic board assembly away from the CRT.
5. Disconnect the switch case from the main logic board by unplugging the power switch connector (P7).
6. On the switch case, unfasten the screw holding the power switch.
7. Unwind the wires from the wire clips, noting how they are wrapped.
8. Pull the button off the shank, and lift the switch out of the case. Keep the button.

Replace

1. Insert the shank through the slot in the switch case. Place the switch so the wires point directly from it to the wire clip.
2. Slip the orange wires between the wire clips on the back of the switch case.
3. Attach the screw.
4. Push the switch button onto the shank (parallel to the contrast knob).
5. Replace rear cover and switch case.

❑ CONTRAST CONTROL

Materials Required

Medium Phillips screwdriver
Flatblade screwdriver
7/16" hex nut driver
Safety goggles

Remove

1. Remove the rear cover and the switch case.
2. Discharge the CRT.
3. Remove the four screws holding the main logic board assembly to the CRT mounting plate.
4. Pull the main logic board assembly away from the CRT.
5. Disconnect the switch case from the main logic board by unplugging the contrast control connector (P8).
6. Slide a flat screwdriver blade through the slots in the switch case and release both the latches that hold the contrast control knob (Figure 13, #1).
7. Swing the wheel section away from the case (Figure 13, #2).

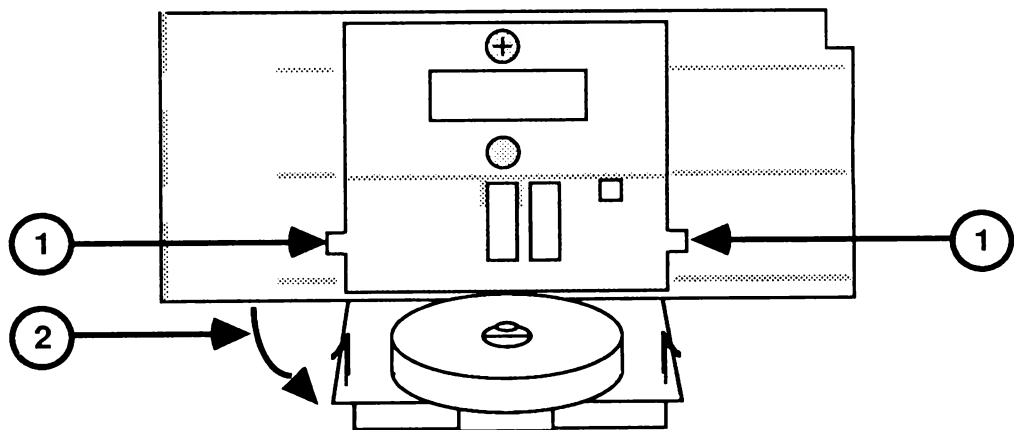


FIGURE 13

8. Slide the contrast control knob off its stem.
9. Remove the nut and washer with a 7/16" hex nut driver.
10. Slide the contrast control stem out of the hole in the switch case.

Replace

1. Remove the nut and washer from the replacement contrast control.
2. Insert the contrast control stem through the hole in the side of the switch case so that the small tab fits into the slot on the side of the switch case.
3. Replace the washer and nut on the stem. Tighten carefully so that the small tab is not twisted out of the slot.
4. Slide the plastic wheel onto the stem with its rim toward the side of case and the flat side of the wheel toward the inside of the case.
5. Close the switch case, snapping both latches shut.
6. Replace the contrast control connector at J8.
7. Fasten the main logic board assembly to CRT mounting plate.
8. Replace the rear cover.

□ LED ASSEMBLY

Materials Required

Medium Phillips screwdriver
Safety goggles

Remove

1. Remove the rear cover.
2. Discharge the CRT.
3. Remove the main logic board.
4. Remove the CRT.
5. Remove the screw from the LED board. Lift the LED assembly out of the case.

Replace

1. Position the LED assembly so the deflection shield fits inside the rim on the bezel. Fasten the screw.
2. Replace the CRT.
3. Replace the main logic board.
4. Replace the rear cover.

□ BEZEL

Materials Required

Medium Phillips screwdriver
Safety goggles

Remove

1. Remove the rear cover.
2. Set aside the front foot to install on new bezel.
3. Discharge the CRT.
4. Remove the main logic board.

Note: If the foot is on, support the CRT carefully until you finish disconnecting.
5. Remove the CRT. Keep the CRT mounting plate for use in the new case.
6. Unfasten the screw that holds the LED assembly.
7. Remove the brackets for the rear cover screws and keep them to install in the new case.

Replace

1. Fasten the mounting brackets into the new bezel.
2. Replace the LED assembly.
3. Replace the CRT.
4. Replace the main logic board.
5. Replace the rear cover.

Monochrome Monitor

Section 3 – Adjustments

□ CONTENTS

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3.9	Focus

□ INTRODUCTION

In exceptional circumstances, the pre-aligned CRT assembly may need adjustment following the replacement of the main logic board or other modules. After any such service, check the text and graphics production by viewing any program generating text and graphics.

Do Not Adjust the Yoke

All yoke adjustments have been preset by the manufacturer. Do not attempt to make any tilt, ring, or geometric adjustments on the Monochrome Monitor. If the customer's monitor has adjustment problems that the following procedures will not correct, use the procedures found in the Troubleshooting Section to isolate the faulty module, and return that module to Apple for repair.

Location of Controls

The contrast control is located on the side of the monitor, beneath the on-off switch. Three other adjustment controls are located on the rear panel of the monitor so that both the dealer and the customer can reach them. The only internal adjustments are sub-bright, horizontal hold, and focus. The focus should **very rarely** need adjustment.

❑ IMPORTANT SAFETY INSTRUCTIONS

WARNING: Read and follow the safety instructions below. Failure to follow them could result in electrical shock.

1. During these adjustments your hand will come close to extremely high voltages on the tube, anode, anode lead, and yoke wires (Figure 1, #1, #2, #3, and #4). Avoid touching these parts.

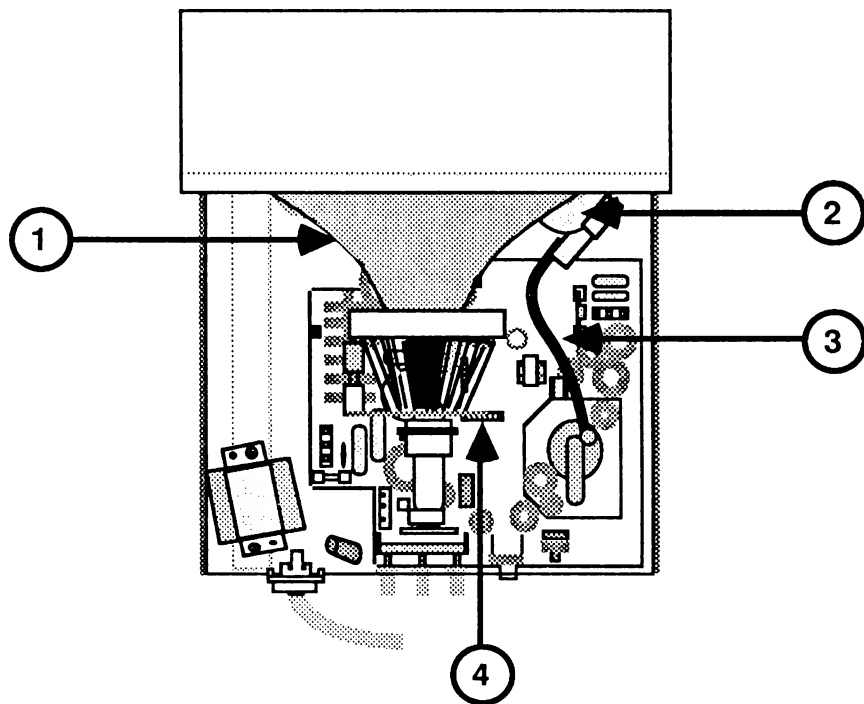


FIGURE 1

2. Use only one hand to make all adjustments! Never touch the chassis while making adjustments.
3. Use only a three-prong, grounded, electrical outlet installed by a qualified electrician, and **do not under any circumstances use an adapter plug.**

4. Do not attempt to make any adjustments on the monitor other than those directed in this section, and do those with extreme caution.
5. Read and follow the additional Safety Precautions in the Basics Section for this product.

□ PRE-ADJUSTMENT SET-UP PROCEDURE

Materials Required

Apple Monochrome Monitor
Apple IIGS™ or Apple IIe computer
Apple IIGS Diagnostics Diskette (5.25" or 3.5" format)
Mirror with prop (for viewing screen during adjustments)

Procedure

1. Turn the monitor off and disconnect the power cord.
2. Disconnect the video cable from the back of the monitor.
3. Remove the back case. (See Section 2, Take-Apart.)
4. Set the monitor on its feet, reconnect the power cord and video cable, and turn on the monitor and computer.
5. Allow the monitor to warm up for at least 15 minutes.
6. Prop the mirror in front of the screen so that you can see the results of your adjustments as you work.
7. Use **Video Pattern Tests** on the *Apple IIGS Diagnostics Diskette* (see Section 3, Diagnostics, in *Apple IIGS Technical Procedures*).

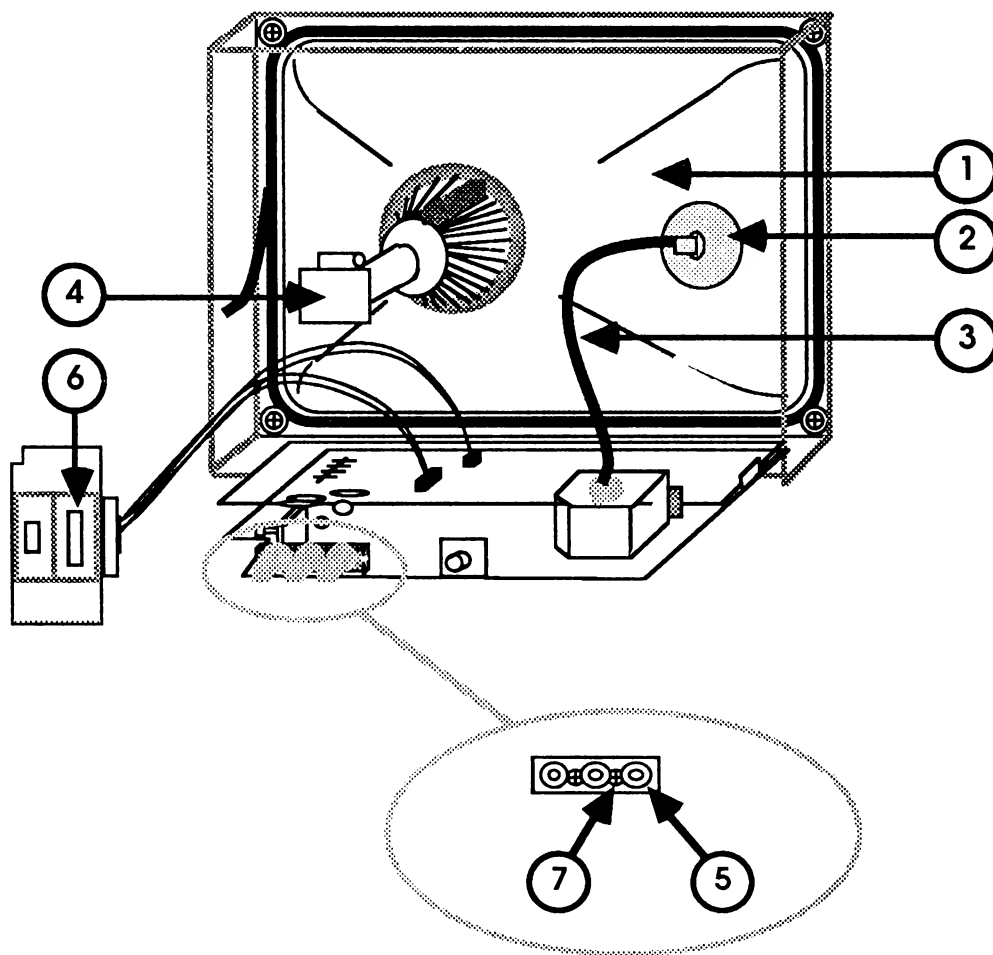


FIGURE 2

□ ADJUSTMENTS

WARNING: *There are extremely high voltages on the tube, the anode, the anode lead, and on ends of yoke wires (Figure 2, #1, #2, #3, and #4). DO NOT TOUCH THEM.*

Use only one hand to make all adjustments. Never touch the chassis with your free hand.

Materials Required

Plastic flatblade screwdriver (tweaker)
Apple IIGS Diagnostics Diskette (see *Apple IIGS Technical Procedures*, Section 3, Diagnostics)
Small piece of paper
Pen or soft pencil
Safety goggles

Sub-Brightness

1. Select **Hires Graphics Test** from **Video Tests**.
2. Turn the Brightness knob (Figure 2, #5) to make the screen as bright as possible.
3. Turn the Contrast knob (Figure 2, #6) to make the screen as bright as possible.
4. Using a plastic flatblade screwdriver, turn the Sub-Brightness control (Figure 2, #7) until you can see the slanted raster lines on the screen.
5. Turn the Sub-Brightness control down until the raster lines disappear.
6. Turn both the Brightness and Contrast controls down slightly, to adjust the screen for normal viewing.

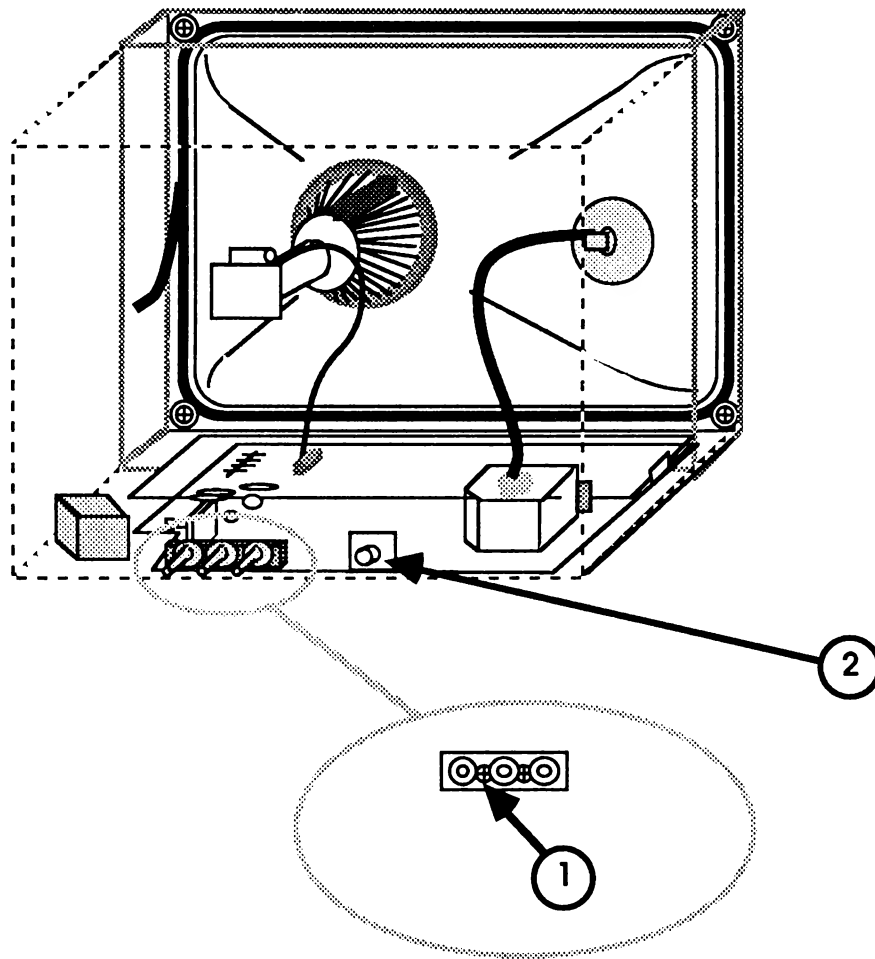


FIGURE 3

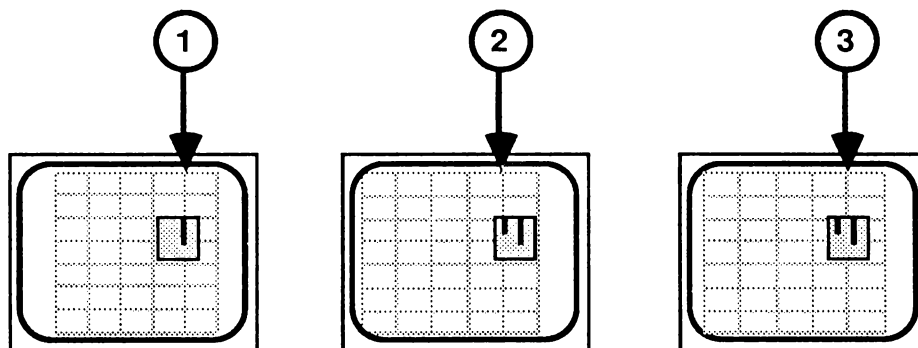


FIGURE 4

Horizontal Hold

1. Select **Hires Graphics Test** from **Video Tests**.
2. Turn the horizontal hold control (Figure 3, #1) **clockwise** until the screen goes out of synchronization.
3. Turn the control **counter-clockwise** until the screen becomes normal.
4. Choose a vertical line as a reference. Tape a piece of paper on the screen and make a mark on it at your reference line (Figure 4, #1).
5. Continue turning the control **counter-clockwise** until the horizontal synchronization again goes bad.
6. Turn the control **clockwise** again to correct the screen condition, and stop.
7. At the point where the synchronization becomes good, mark where your reference line is now. (Figure 4, #2 shows the screen in the mirror.)
8. Turn the horizontal hold control until the vertical line on the screen is halfway between the two marks (Figure 4, #3).

Focus

You should almost never have to adjust this control.

1. Use either display from **40/80 Column Text Test**.
2. Insert plastic flatblade screwdriver (tweaker) in Focus control (Figure 3, #2) and twist slightly to either side to improve focus.
3. If focus does not improve, replace CRT (See Section 2, Take-Apart).

Monochrome Monitor

Section 4 – Troubleshooting

❏ CONTENTS

- 4.2 Introduction
- 4.2 Monochrome Monitor Symptom Chart

❑ INTRODUCTION

This section contains a symptom chart showing common problems and their solutions. Find the best description of your defective monitor, and then try the recommended actions in the order listed.

If the first corrective action does not solve the problem, put back the original module or part before trying the next action.

❑ MONOCHROME MONITOR SYMPTOM CHART

- | | |
|---|---|
| • <i>No power
(LED doesn't light)</i> | <ol style="list-style-type: none">1. Check fuse; replace if blown. If it blows again, replace transformer.2. Replace transformer.3. Replace power switch. |
| • <i>No raster</i> | <ol style="list-style-type: none">1. Check that video cable is securely connected.2. Adjust the external brightness control on the back of the case.3. Adjust the contrast control.4. Check that all connectors are secure on the CRT board and the main logic board.5. Replace main logic board.6. Replace CRT. |
| • <i>One vertical raster line appears</i> | <ol style="list-style-type: none">1. Replace main logic board.2. Replace CRT assembly. |
| • <i>Raster deformed</i> | - Replace CRT assembly. |
| • <i>Wavy picture</i> | - Replace main logic board. |
| • <i>Spot remains with unit off</i> | - Replace main logic board. |
| • <i>Brightness range abnormal</i> | <ol style="list-style-type: none">1. Replace main logic board.2. Replace power transformer. |

- *Raster size small, picture abnormally bright* - Replace main logic board.
- *No vertical synchronization* - Replace main logic board.
- *Screen bright, no picture* - Replace main logic board.
- *15 or more seconds for picture to appear* - Change CRT assembly.
- *Picture appears and disappears* 1. Replace main logic board.
2. Replace CRT assembly.
- *Out of focus* - See "Focus" in Section 3, Adjustments.
- *Won't focus* 1. Replace main logic board.
2. Replace CRT.
- *Narrow raster* - Replace main logic board.
- *Picture compressed or stretched out* - Replace main logic board.
- *Picture tears* - See "Horizontal Synchronization" in Section 3, Adjustments.
- *Image reversed (after servicing)* - Yoke connector (P4) is plugged in backwards.
- *Image inverted (after servicing)* - Yoke connector (P3) is plugged in backwards.

Monochrome Monitor

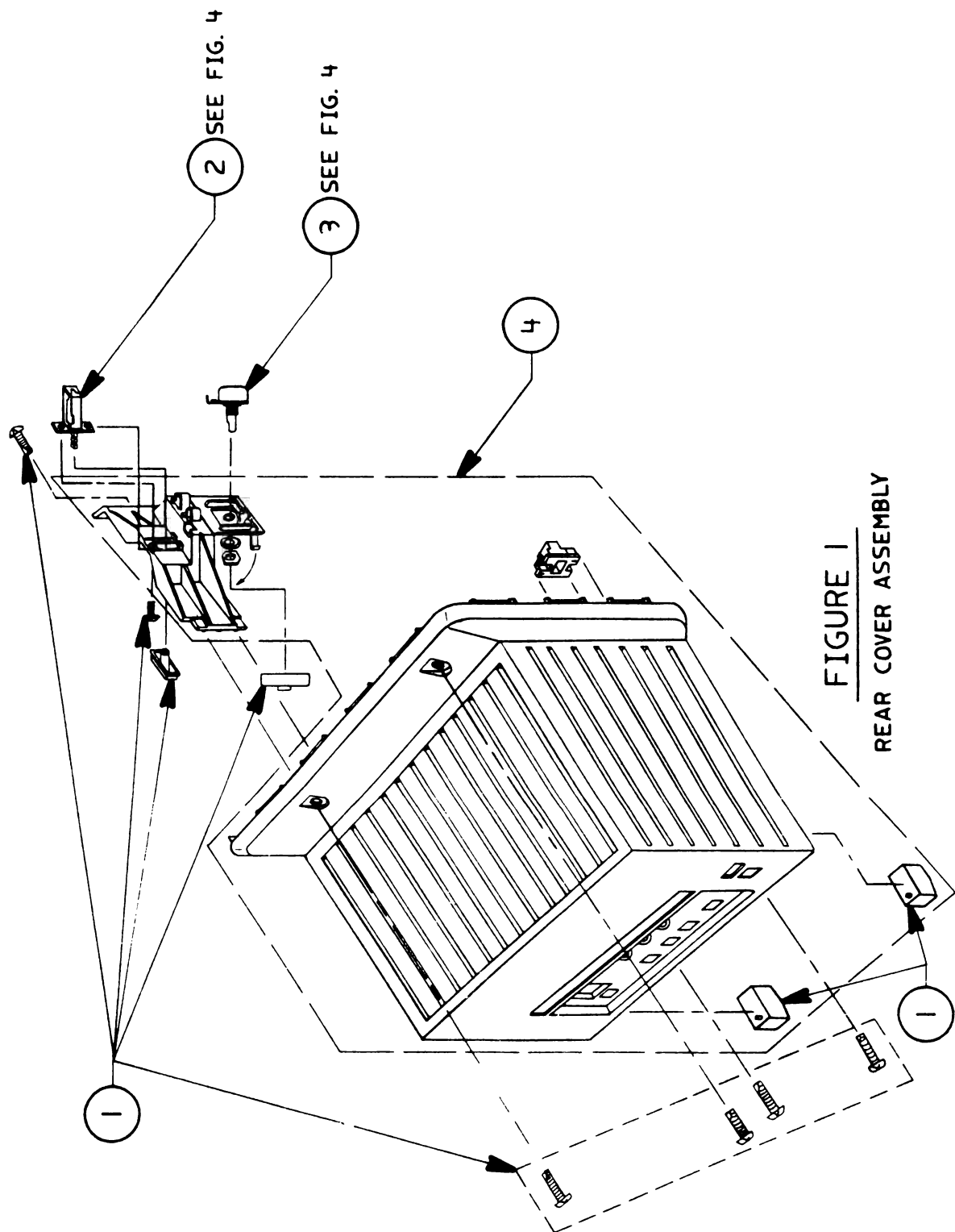
Section 5 – Illustrated Parts List

❏ CONTENTS

- 5.3 Rear Cover Assembly (Figure 1)
- 5.5 CRT, Main Logic Board, and Transformer (Figure 2)
- 5.7 Bezel Assembly (Figure 3)
- 5.9 Other Parts (Figure 4)

The figures and lists in this section include all piece parts that can be purchased separately from Apple for the Apple Monochrome Monitor, along with their part numbers. These are the only parts available from Apple. Refer to your *Apple Service Programs Manual* for prices.

Note: Screw/Knob Set parts are included where applicable on Figures 1-3.



□ MONOCHROME MONITOR – REAR COVER ASSEMBLY
(Figure 1)

<u>Item</u>	<u>Part No.</u>	<u>Description</u>
1	956-0004	Screw/Knob Set (See also Figures 2 and 3.)
2	937-0018	On/Off Switch
3	905-0002	Contrast Control
4	949-0068	Rear Cover Assembly

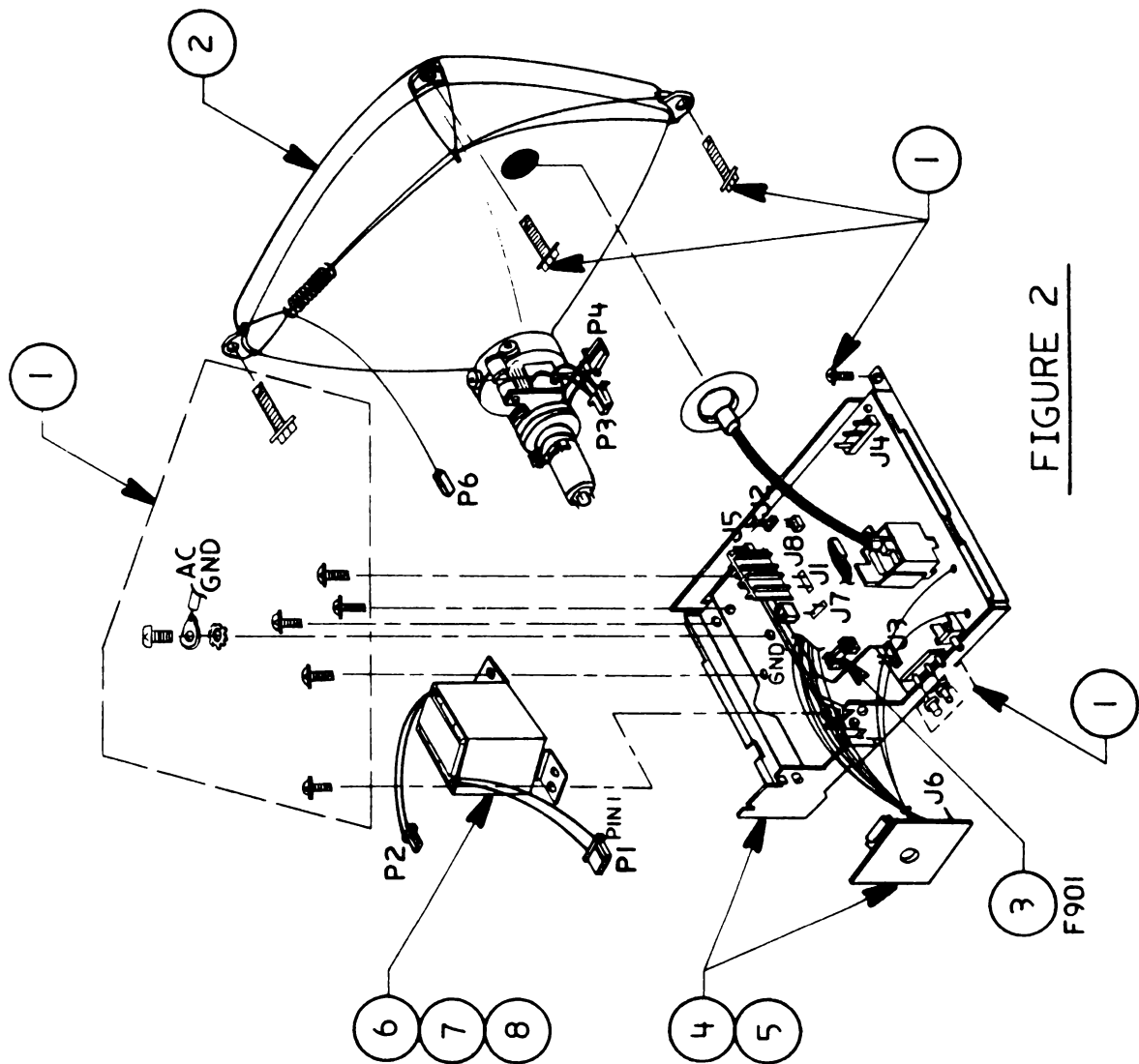


FIGURE 2

□ MONOCHROME MONITOR – CRT, MAIN LOGIC BOARD, AND TRANSFORMER (Figure 2)

<u>Item</u>	<u>Part No.</u>	<u>Description</u>
1	956-0004	Screw/Knob Set (See also Figures 1 and 3.)
2	076-0224	CRT
3	740-0308	Fuse
4	661-0346	Main Logic Board, 110v
5	661-0362	Main Logic Board, 220/240v
6	915-0009	Transformer, 110v
7	915-0010	Transformer, 220v
8	915-0011	Transformer, 240v

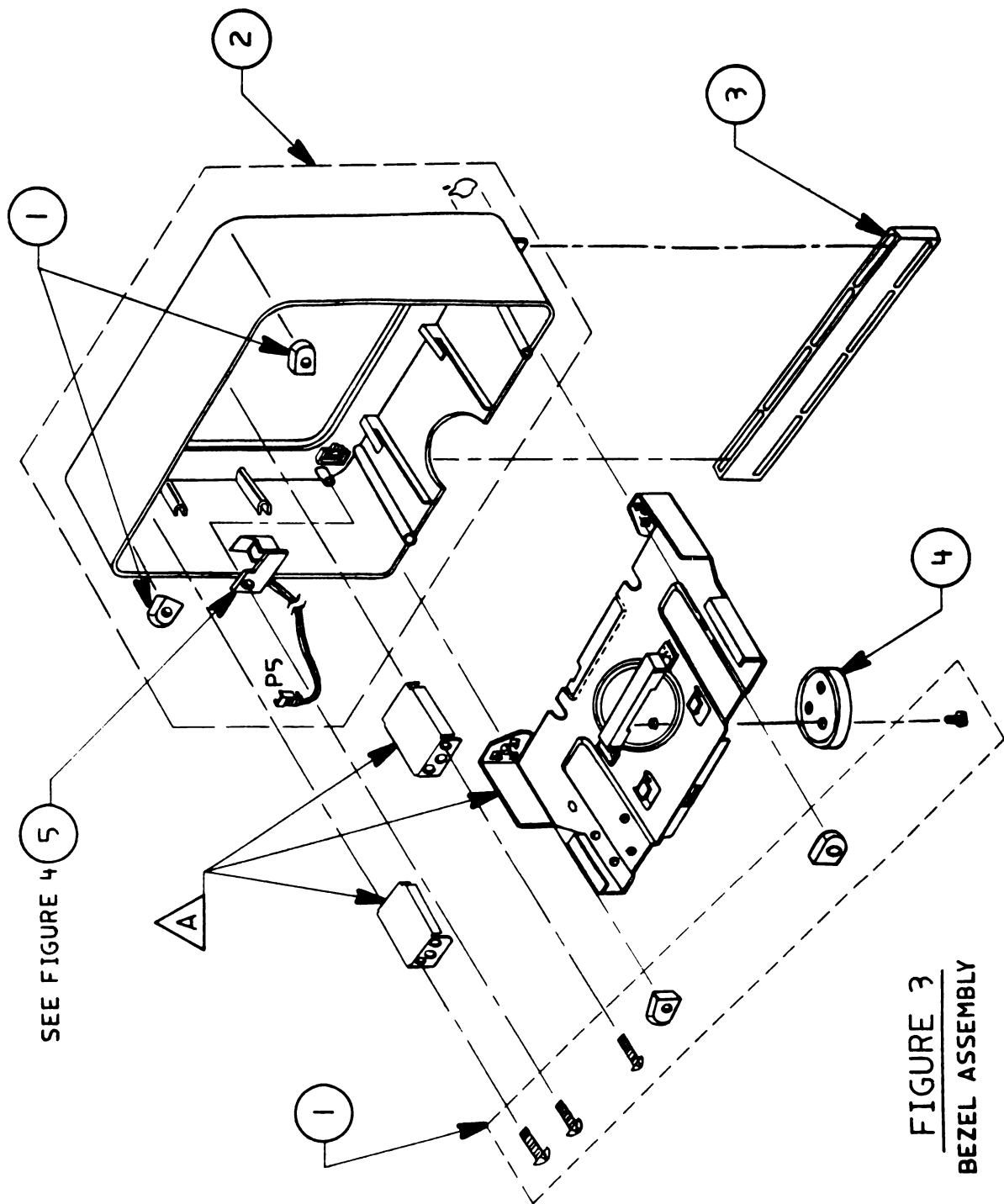


FIGURE 3
BEZEL ASSEMBLY

□ MONOCHROME MONITOR – BEZEL ASSEMBLY (Figure 3)

<u>Item</u>	<u>Part No.</u>	<u>Description</u>
1	956-0004	Screw/Knob Set (See also Figures 1 and 2.)
2	949-0067	Bezel Assembly
3	949-0056	Front Foot
4	949-0057	Bottom Plate
5	930-0005	LED Assembly

Note: The items marked *A* are not available from Apple. If a new bezel is required, these parts must be retained from the old bezel and reinstalled in the replacement bezel.

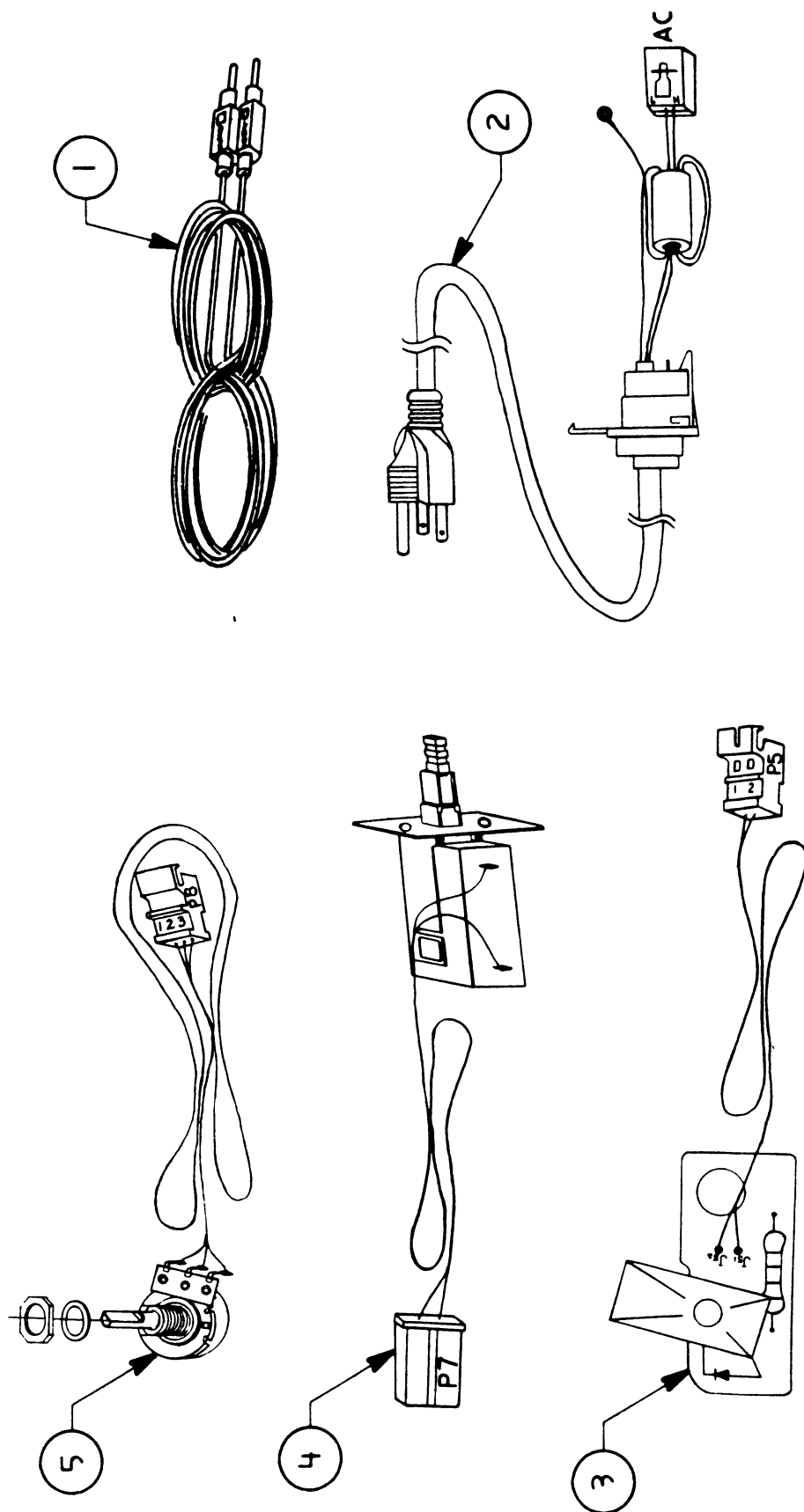


FIGURE 4