

MAP 0400: Monochrome Display and Printer Adapter

| Symptom Explanation | Conditions That Could Cause This Symptom |
|--|--|
| You have entered this MAP because you were unable to complete the POST, you suspect a Monochrome Display and Printer Adapter problem, you suspect a monochrome display problem, or you received a 4XX error message. | <ul style="list-style-type: none">• Brightness and contrast adjustments are incorrect• The Monochrome Display and Printer Adapter is failing.• The monochrome display is failing.• The power supply is failing.• The system board is failing |

001

- Power off the system.
- Disconnect the monochrome display signal cable from the system unit.
- Insert the Advanced Diagnostics diskette into drive A.
- Power on the system and listen for the audio response during the POST.

WAS THE AUDIO RESPONSE ONE LONG AND TWO SHORT BEEPS?

Yes No

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002

Go to Step 006 in this MAP.

003

Check the switch setting on the system board.

(Step 003 continues)

003 (continued)

IS THE SYSTEM BOARD SWITCH SETTING CORRECT?

Yes No

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004

Correct the switch setting. Go to Step 001 in this MAP to verify system operation.

005

Replace the monochrome display adapter (IBM Monochrome Display and Printer Adapter). If this does not correct the problem, replace the system board.

006

(From Step 002 in this MAP)

- Power off the system.
- Connect the monochrome display signal cable to the system unit.
- Power on the system.
- Set the brightness and contrast controls fully clockwise.

IS THE IMAGE ON THE SCREEN STEADY AND READABLE, AND ARE THE CHARACTERS CORRECT?

Yes No

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007

Go to Step 026 in this MAP.

008

The display may function correctly except the cursor may be missing or out of position.

IS THE CURSOR VISIBLE AND IN THE CORRECT POSITION ON THE SCREEN?

Yes No

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009

Replace the monochrome display adapter (IBM Monochrome Display and Printer Adapter). If this does not correct the problem, replace the system board.

(Step 010 continues)

010

The image on the screen may be distorted or the characters may be the wrong size, as in Figure 1.

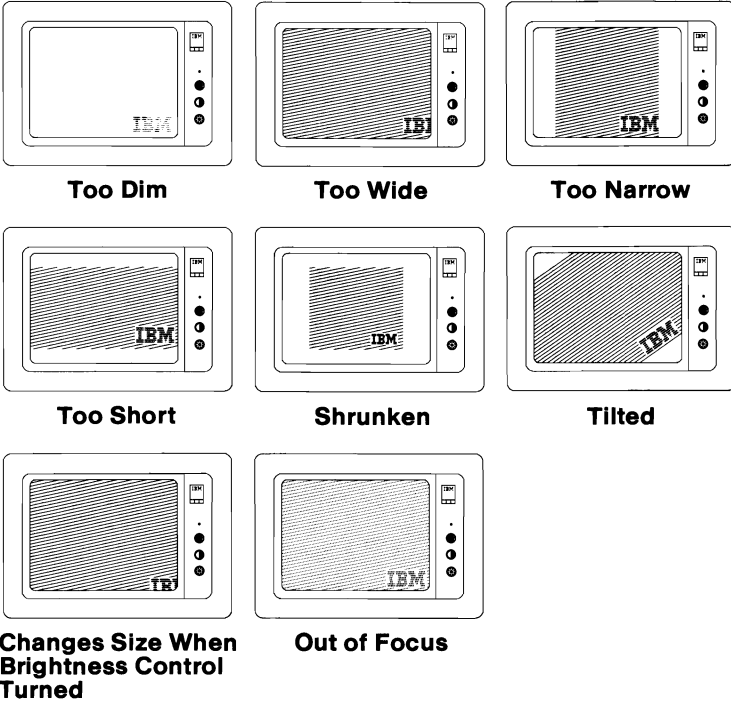


Figure 1. Distorted Images

IS THE IMAGE ON THE SCREEN DISTORTED OR THE WRONG SIZE? (Figure 1)

| | |
|-----|-----------------------------|
| Yes | No |
| | |
| | 011 |
| | Go to Step 013 in this MAP. |

012
 Replace the monochrome display.

0400

013

(From Step 011 in this MAP)

- Run the Monochrome and Printer Adapter tests. Use the **(RUN TESTS ONE TIME)** option.
- Select option **10 (RUN ALL ABOVE TESTS)**.

DID THE DISPLAY ATTRIBUTES SCREEN APPEAR WITHOUT A 401 ERROR MESSAGE?

Yes No

014

Replace the monochrome display adapter (IBM Monochrome Display and Printer Adapter). If this does not correct the problem, replace the system board.

015

- Adjust the brightness and contrast controls until the intensified line is brighter than the other lines.

WERE YOU ABLE TO ADJUST THE INTENSIFIED LINE BRIGHTER THAN THE OTHER LINES?

Yes No

016

Go to Step 026 in this MAP.

017

DO THE LINES ON THE SCREEN MATCH THEIR DESCRIPTIONS?

Yes No

018

Replace the monochrome display adapter (IBM Monochrome Display and Printer Adapter). If this does not correct the problem, replace the system board.

019

- Press **Y** then **Enter**.
The Character Set screen appears.

(Step 019 continues)

019 (continued)

ARE ALL THE CHARACTERS PRESENT AND CORRECT ON THE DISPLAY (NO EXTRA DOTS IN THE CHARACTER BOXES OR MISSING DOTS)?

Yes No

020

Replace the monochrome display adapter (IBM Monochrome Display and Printer Adapter). If this does not correct the problem, replace the system board.

021

- Press **Y** then **Enter**.
- The 80x25 Display screen appears.

IS THE BORDER BLACK AND ARE THE CHARACTERS PRESENT AND SOLID?

Yes No

022

Replace the monochrome display adapter (IBM Monochrome Display and Printer Adapter). If this does not correct the problem, replace the system board.

023

- Disconnect the printer cable if it is attached to the IBM Monochrome Display and Printer Adapter.
- Install the printer adapter wrap plug (IBM part 8529228).

Note: Failure to install the wrap plug will result in an invalid error message.

- Press **Y** then **Enter**.
- Press **Enter** to begin the test.

DID YOU RECEIVE A 432 ERROR MESSAGE?

Yes No

024

You have successfully completed the Advanced Diagnostic tests. If you suspect an intermittent problem, start an error log. If you need instructions, refer to the Reference manual.

025

Replace the monochrome display adapter (IBM Monochrome Display and Printer Adapter). If this does not correct the problem, replace the system board.

026

(From Steps 007 and 016 in this MAP)

The following steps help you diagnose a problem in the IBM Monochrome Display through the use of audio responses.

- Power off the system.
- Insert the Advanced Diagnostics diskette into drive A.
- Power on the system.
- Follow the steps in Figure 2. Listen for the "beep" each time you press **Enter**.

Note: Use the numbers on the top row of the keyboard; do not use the numeric keypad.

| Steps | Test Selected | Audio Response |
|--|--|----------------|
| 1. Press \emptyset | Run Diagnostic Tests | None |
| 2. Press Enter | --- | 1 Beep |
| Note: Skip Steps 3 and 4 if you have only one display adapter in your system. | | |
| 3. Press Y or N | Is a monitor attached to every display adapter? | None |
| 4. Press Enter | --- | 1 Beep |
| 5. Press Y | Is the installed-devices list correct? | None |
| 6. Press Enter | --- | 1 Beep |
| 7. Press \emptyset | Run tests one time | None |
| 8. Press Enter | --- | 1 Beep |
| 9. Press 4 | Select Monochrome Display and Printer Adapter test | None |
| 10. Press Enter | | 2 Beeps |

Figure 2. Audio Responses

(Step 026 continues)

026 (continued)

DID YOU RECEIVE THE CORRECT AUDIO RESPONSES?

Yes No

027

You may have a power supply or connector problem. Check the connections; if the connections are good, go to "MAP 0020: Power Start."

028

IS THE MONOCHROME DISPLAY AND PRINTER ADAPTER TEST DISPLAYED ON THE SCREEN, AND ARE THE CHARACTERS READABLE AND CORRECT?

Yes No

029

Replace the monochrome display adapter (IBM Monochrome Display and Printer Adapter).

030

- Type **11**, then press **Enter**.
- Disconnect the monochrome display signal cable.
- Set the meter to the 12 Vdc scale.

Note: Make all voltage readings on the adapter connector.

- Measure the voltage between pins 2 (ground) and 7 for 2.4 to 3.8 Vdc (Figure 3 on page 0400-8).
- Measure the voltage between pins 2 (ground) and 6 for 2.4 to 3.8 Vdc (Figure 3 on page 0400-8).

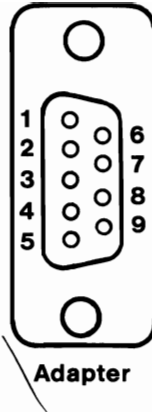


Figure 3. Adapter Connector

ARE THE VOLTAGES CORRECT?

Yes No

031

Replace the monochrome display adapter (IBM Monochrome Display and Printer Adapter).

032

- Press **Enter**.
- Measure the voltage between pins 2 (ground) and 7 for 0.0 to 0.5 Vdc (Figure 3).
- Measure the voltage between pins 2 (ground) and 6 for 0.0 to 0.5 Vdc (Figure 3).

ARE THE VOLTAGES CORRECT?

Yes No

033

Replace the monochrome display adapter (IBM Monochrome Display and Printer Adapter).

034

- Press **Enter**, and wait for two beeps.
- Measure the voltage between pins 2 (ground) and 8 for 0.4 to 1.1 Vdc (Figure 3).
- Measure the voltage between pins 2 (ground) and 9 for 3.0 to 4.2 Vdc (Figure 3).

034 (continued)

ARE THE VOLTAGES CORRECT?

Yes No

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035

Replace the monochrome display adapter (IBM Monochrome Display and Printer Adapter).

036

- Type **12**, then press **Enter**.
- Measure the voltage between pins 2 (ground) and 8 for 1.5 to 2.5 Vdc (Figure 3 on page 0400-8).
- Measure the voltage between pins 2 (ground) and 9 for 1.8 to 2.6 Vdc (Figure 3 on page 0400-8).

ARE THE VOLTAGES CORRECT?

Yes No

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037

Replace the monochrome display adapter (IBM Monochrome Display and Printer Adapter).

038

Replace the monochrome display.

Notes:

