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COVER Book Cover

5494 Remote Control Unit

Problem Determination Guide

Quick Reference

Release 3.2

Document Number GA27-3909-05

Part Number 85H4908

File Number AS400/5494-09

NOTICES Notices

____ **Note** _____

```
 _____
|                                                        |
| Before using this information and the product it supports, be sure |
| to read the general information under "Notices" in topic FRONT_1. |
|                                                        |
|_____|
```

| **5494 on the World Wide Web:**
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EDITION Edition Notice

Sixth Edition (November 1996)

This edition applies to Release 3.2 of the IBM 5494 Remote Control Unit and to all subsequent releases and modifications until otherwise indicated in new editions.

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FRONT_1 Notices

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FRONT_1.1 Trademarks

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1.0 Topic 1. 5494 PD Guide Quick Reference

Subtopics:

1.1 How to Use This Book

This book is to be used by:

- **The customer** to determine whether to perform problem determination or contact 5494 Service.

- **The customer engineer (CE)** to determine the repair action.

Both the customer and the CE should begin problem determination by starting at "Message Codes" in topic 1.8 if a message code is displayed on the left-hand side of the 5494 liquid crystal display (LCD).

The explanations and actions for each message code will indicate to the customer and the CE the next action. (See "Codes Displayed on the Operator Panel LCD" in topic 1.5 for more details.)

If the customer is having a 5494 problem, no message is displayed on the LCD, the Ready light-emitting diode (LED) on the 5494 is **on**, and no system reference code (SRC) is being displayed on any attached workstation, refer to *IBM 5494 Remote Control Unit Maintenance Information* and begin with the maintenance analysis procedure (MAP) for the start of call.

1.2 Front View of the 5494

Look at the following figure to familiarize yourself with the 5494.

Front View of 5494

Figure 1. 5494 Front View
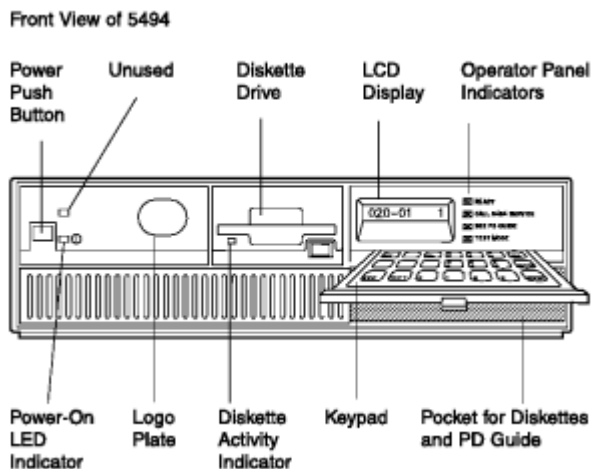
1.3 Normal Power-On Display Sequence

Soon after the 5494 power pushbutton is set to **ON** (l):

1. All LEDs are **ON** for 1 second.

2. All LEDs are **OFF** for 1 second.

3. The Test Mode LED is switched **ON**.

4. The message code 001-01, is displayed on the LCD, indicating that a power-on self-test (POST) is running.

5. The date and time are displayed on the LCD.

6. The microcode is loaded.

7. The Test Mode LED is switched **OFF**.

8. Within 10 seconds, the Ready LED is switched **ON**.

Notes:

1. Other LED indications are defined in <u>"LED Indication Table" in</u> <u>topic 1.4</u>.

2. Other message codes displayed are defined in <u>"Message Codes" in</u> <u>topic 1.8</u>.

1.4 LED Indication Table

To use this table, locate the X corresponding to the LEDs that are **ON**, and then look at the Indication column for the note that provides the appropriate explanation.

- *X indicates that the LED is* **ON**

Table 1. LED Indicators

Ready	Contact 5494 Service	See PD Guide	Test Mode	Indication
			X	Note (1)
No LEDs are lit				Note (2)
X				Note (3)
X			X	Note (4)
X	X			Note (5)
X		X		Note (6)
	X		X	Note (7)
		X	X	Note (8)

Notes:

1. The POST or extended diagnostics are running.

2. A critical failure occurred that prevents control of the LEDs, or an initial program load (IPL) successfully loaded the operational code, which is currently performing initialization.

   If none of the LEDs are **ON** after 1 minute, the customer should refer to the problem determination procedures in the *IBM 5494 Remote Control Unit User's Guide* to determine the necessary action.

   If none of the LEDs are **ON** after 1 minute, the CE should refer to "MAP 100: Start of Call" in *IBM 5494 Remote Control Unit Maintenance Information* to determine the necessary action.

3. The 5494 has completed the POST and is in normal mode.

4. The 5494 is in configuration mode or concurrent mode.

5. An error exists on the 5494 that requires service. Some function may be available.

6. An error exists that requires customer problem determination. Some function is available.

   The customer and the CE should go to "Message Codes" in topic 1.8 and look up the message code displayed on the left-hand side of the LCD. The message code suggests the appropriate action.

7. Service on the 5494 is required. An error, detected by the POST or extended diagnostics, has occurred.

   The customer and the CE should go to "Message Codes" in topic 1.8 and look up the message code displayed on the left-hand side of the LCD. The message code suggests the appropriate action.

8. Customer problem determination is required. An error, detected by the POST or extended diagnostics, has occurred.

   The customer and the CE should go to "Message Codes" in topic 1.8 and look up the message code displayed on the left-hand side of the LCD. The message code suggests the appropriate action.

1.5 Codes Displayed on the Operator Panel LCD

Codes that are displayed on the operator panel LCD are used to determine the status of the 5494 hardware and software.

- A **message code** is displayed on the left-hand side of the LCD.

- A **data field** is displayed on the right-hand side of the LCD. The data field can be an SRC or information defined by the message code. In the following example, the data field is an SRC.

Note: SRCs can also appear on the screens of workstations attached to the 5494.

```
 _____
|  xxx           aaa  |
|___ _____ _____|
    |           |
    |           |
message code   data field
```
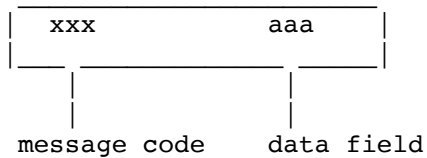
Figure 2. Message Code and Data Field Displayed on LCD

Notes:

1. See "Message Codes" in topic 1.8 for the message codes that can be displayed.

2. See "SRCs" in topic 1.10 for the 3-digit hardware SRCs that can be displayed. All 4- to 12-digit SRCs can be found in the SRC sections of the following publications:

Customer
   IBM 5494 Remote Control Unit User's Guide

CE
   IBM 5494 Remote Control Unit Maintenance Information

1.6 Running Extended Diagnostics

To begin extended diagnostics:

1. Switch the 5494 power **OFF (0)**.

2. Remove the system diskette from the diskette drive.

3. Because extended diagnostics automatically perform a cable wrap test on the cables that connect the 5494 to the modem, DCE or to the LAN, it is important that these cables, if present, be connected correctly before beginning extended diagnostics.

- For external communications cable (modem or DCE connection), the cable must be connected to the 5494 but does not need to be connected to the modem or DCE. The diagnostics will automatically perform the cable wrap test.

- For Token-Ring connections using:

  - IBM Cabling System data connectors, connect the cable to the 5494 and disconnect it from the LAN.

  - Any other type of cabling connectors, disconnect the cable from the Token-Ring adapter and connect the wrap plug, provided with the cable, to the Token-Ring adapter.

- For Ethernet connections using:

  - 10BASE2 or 10BASE5, connect the 5494 to the LAN or to a wrap plug. If this is not possible, answer "no" to the panel that asks if the 5494 is connected to the LAN. This will prevent the wrap test from being performed.

  - 10BASE-T, no wrap test is performed and no LAN connection is necessary. If the 5494 is connected to the LAN, you can leave it connected.

4. Switch the 5494 power **ON** (l).

5. Message codes are displayed on the LCD during extended diagnostics. These message codes indicate the status of the 5494 or prompt the user for an action.

   When the message code 003-02 is displayed on the LCD, insert the system diskette, type **0**, and press **Enter** to begin extended diagnostics.

Note: If any other message code is displayed on the LCD, look up the message code in to determine the next action.

6. When the message code 020-01 is displayed, press and hold **Alt** and press **PF1** to access the CE main menu.

7. When the message code 030-01 appears, the CE main menu has been accessed.

See the following diagram to determine the flow of extended diagnostics.
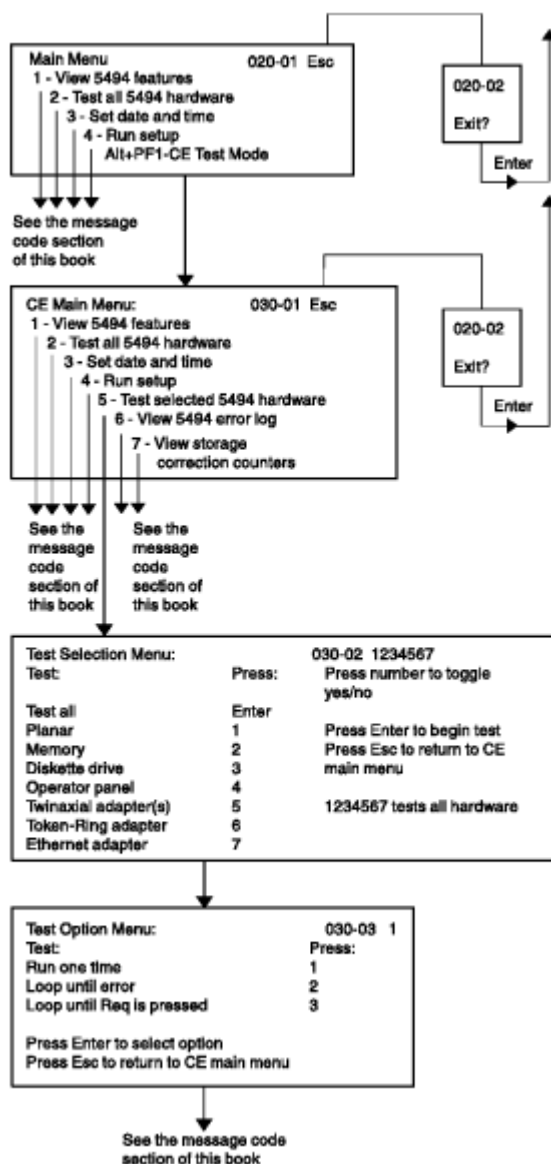
1.7 Message Code Groupings

Message codes are grouped in numeric blocks, according to the type of code, as follows:

Numeric Block Type

000
> Req has been pressed on the keypad

001-099
> POST and extended diagnostics

100-198
> Reserved

199
> 5494 hardware error

200-299
> Request codes

300-310
> Configuration copy messages

350-730
> Operational code errors

731-998
> Unused

999
> Request code entered not valid.

1.8 Message Codes

```
Message codes are displayed on the left-hand side of the LCD and result
from an error condition or a user request for information.


 _____
|   xxx             |
|___ _____|
    |
    |
  message code
```
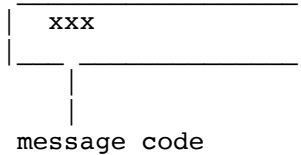
000

Cause: Indicates that the Req key has been pressed.

Customer and CE Action: Type the 3-digit request code, and then press **Enter**. See "Summary of Concurrent Mode Request Codes" in topic 1.13 for the 3-digit request codes.

001-01

Cause: Performing POST. This test runs automatically each time the 5494 power is turned on, or the 5494 is restarted. During this test, a flashing asterisk (*) is displayed on the right-hand side of the LCD. This test usually lasts about 1 minute and is followed by an IPL.

Customer and CE Action: None.

001-02

Cause: Loading extended diagnostics from the system diskette. This takes about 30 seconds.

Customer and CE Action: None.

```
002-01
```

Cause: 5494 failure.

Customer Action: Contact 5494 Service and report the SRC displayed on the right-hand side of the LCD.

CE Action: Look up the SRC displayed on the right-hand side of the LCD. See "SRCs" in topic 1.10.

```
002-02
```

Cause: An error has been detected during the POST. This may be due to the installation or removal of an adapter. Extended diagnostics can resolve the problem or provide more information.

Customer and CE Action: Record the SRC displayed on the right-hand side of the LCD. Then, press **Enter** to run extended diagnostics.

```
002-03
```

Cause: The 5494 operator panel cannot communicate with the 5494 planar.

Customer Action: Contact 5494 Service and report the SRC displayed on the right-hand side of the LCD.

CE Action: Look up the SRC displayed on the right-hand side of the LCD. See "SRCs" in topic 1.10.

```
002-04
```

Cause: An error has occurred during POST, but the 5494 can perform some functions.

Customer and CE Action: Record this message code and the SRC displayed on the right-hand side of the LCD, and then press **Enter** to continue.

002-05

Cause: An error has occurred. At this time, three keys are active on the keypad and can be used to change the IPL mode. The default is 0, which will load extended diagnostics.

Customer Action: To load extended diagnostics to better define the cause of the problem, press **Enter**.

If you have already run extended diagnostics and could not resolve the problem, you can attempt normal operation while waiting for 5494 Service. To ignore the error and attempt normal operation:

- To attempt normal operation, type **1** and press **Enter**.
- To attempt a system configuration IPL, type **2** and press **Enter**.

CE Action: If the SRC displayed on the previous screen does not identify the cause of the problem, press **Enter** to load extended diagnostics. Then, select option **2** from the main menu to test all 5494 hardware.

| **Note:** At times, it is possible to operate the 5494 after a POST error.
| For example, if you experienced a 152 error code, you can select "1" on
| the 002-05 panel and press **Enter**. The 5494 will attempt to operate while
| the customer arranges to get the cabling repaired.

002-06

Cause: An unexpected critical error has occurred. This type of error is usually intermittent.

Customer Action: Switch the 5494 power **OFF (0)**, and then back **ON (I)**. If this problem occurs again, contact 5494 Service and report the SRC displayed on the right-hand side of the LCD.

CE Action: Look up the SRC that is displayed on the right-hand side of the LCD. See "SRCs" in topic 1.10.

002-07

Cause: An error has occurred while loading from the diskette.

Customer and CE Action: Press **Enter** to retry the operation. If the error reoccurs, insert the backup copy of the 5494 system diskette and press **Enter** to try again. If the backup diskette loads successfully, order a new system diskette to replace the damaged one.

To order a replacement diskette in the U.S., call 1-800-334-1089. To order a replacement diskette outside the U.S., contact your local IBM branch office. Have the 5494 serial number available.

002–08

Cause: The installed system diskette may be damaged.

Customer and CE Action: Insert the backup copy of the 5494 system diskette and press **Enter** to try again. If the backup diskette loads successfully, order a new system diskette to replace the damaged one.

To order a replacement diskette in the U.S., call 1-800-334-1089.

To order a replacement diskette outside the U.S., contact your local IBM branch office. Have the 5494 serial number available.

002–09

Cause: An unexpected critical software error has occurred.

Customer Action: Switch the 5494 power **OFF (0)** and then back **ON** (l). If this problem persists, install the backup copy of the system diskette in the diskette drive, and then switch the power to **ON** (l) again.

If the problem **does not** occur again, replace the original system diskette. To order a replacement diskette in the U.S., call 1-800-334-1089. To order a replacement diskette outside the U.S., contact your local IBM branch office. Have the 5494 serial number available.

If the problem occurs again, contact 5494 Service and report the SRC shown on the right-hand side of the LCD.

CE Action: Look up the SRC reported by the customer. See ["SRCs" in](#) [topic 1.10](#).

    003-01

Cause: A problem has been detected.

Customer and CE Action: Insert the 5494 system diskette and press **Enter** to run extended diagnostics.

    003-02

Customer and CE Action: Insert the system diskette, pull the 5494 keypad out, and:

- Type **0** and press **Enter** to run extended diagnostics.
- Type **1** and press **Enter** to begin normal operation.
- Type **2** and press **Enter** to start system configuration.

003-03

Cause: The installed diskette is not recognized as the system diskette.

Customer and CE Action: Insert the system diskette and press **Enter** to continue.

If the diskette is the system diskette, remove it and insert the backup copy. Then, press **Enter** to continue. Remember to order a replacement system diskette if you just installed your backup copy.

To order a replacement diskette in the U.S., call 1-800-334-1089.

To order a replacement diskette outside the U.S., contact your local IBM branch office. Have the 5494 serial number available.

    003-04

Cause: The diskette in the diskette drive is not recognized as the 5494 system diskette.

Customer and CE Action: Insert the 5494 system diskette and press **Enter**. If the system diskette was in the drive during this error, remove it, insert the backup copy, and:

- Type **0** and press **Enter** to run extended diagnostics.
- Type **1** and press **Enter** to begin normal operation.
- Type **2** and press **Enter** to start system configuration.

010-01

Cause: The 5494 setup information has been corrupted or no longer matches the installed adapters.

Customer Action: Press **Enter** to run the 5494 setup program. After you run the 5494 setup program, full 5494 function should be available until the 5494 power is turned **OFF** (**0**). However, this error is the result of a hardware failure that requires service. Contact 5494 Service and report SRC 100.

CE Action: Press **Enter** to run the 5494 setup program.

010-04

Cause: Have adapters been added, removed, or moved to a new slot in the 5494?

Customer and CE Action:

- Type **1** and then press **Enter** for **yes**.
- Type **0** and then press **Enter** for **no**.

010-05

Cause: The 5494 contains a defective adapter.

Customer Action: Contact 5494 Service and report the SRC displayed on the right-hand side of the LCD.

CE Action: Look up the SRC that is displayed on the right-hand side of the LCD. See <u>"SRCs" in topic 1.10</u>.

010–06

Cause: The 5494 clock must be set because the date, the time, or both are incorrect.

Customer and CE Action: Press **Enter** to continue.

010–07

Cause: The 5494 clock is not working correctly.

Customer and CE Action: Press **Enter** to attempt to set the clock for use until the 5494 power is turned off.

Note: Errors recorded in the 5494 error log can be missing time-stamp information.

010–08

Cause: The 5494 setup information has been corrupted or no longer matches the installed adapters. This may be due to the installation or removal of an adapter. It may also be caused by IPLing a new release of microcode that supports an installed adapter that was not supported by the previous level of microcode.

Customer and CE Action: Press **Enter** to run the 5494 setup program.

010–09

Customer and CE Action: Press **Enter** to go to the extended diagnostics main menu. Then, type **2** and press **Enter** to perform a more detailed test of the 5494.

020–01

Cause: Extended diagnostics main menu.

Customer and CE Action: See Table 2 for a description of the functions available on the extended diagnostics main menu.

To select from the following functions, press the **up** and **down arrows** and **Enter**, or type the number and press **Enter**.

Table 2. Functions	
Number	**Function**
1	View 5494 features Displays the installed adapters and amount of available storage.
2	Test all 5494 hardware Runs extended diagnostic tests on all hardware. If the 5494 contains an Ethernet adapter, start the test from the CE main menu. Press **Alt+PF1** to access the CE main menu.
3	Set date and time Allows date and time of the internal clock to be changed or viewed.
4	Run setup Initializes the internal descriptions of the installed adapters. If the 5494 contains a Token-Ring adapter, the Token-Ring data rate can be set or changed using the run setup option. Similarly, if the 5494 contains an Ethernet adapter, the media type can be selected or changed using the run setup option.

Press **Esc** to exit extended diagnostics and restart the 5494. Press **Alt+PF1** to access the CE main menu.

020–02

Cause: All 5494 tests have completed. No errors were detected.

Customer and CE Action: Press **Enter** to restart the 5494. Press **Esc** to return to the main menu.

```
020-03
```

Cause: The system diskette installed in the diskette drive may be damaged.

Customer Action: Insert the backup copy of the system diskette, and then press **Enter** to try again.

- If the backup copy loads successfully, order a new system diskette to replace the defective one.

  To order a replacement diskette in the U.S., call 1-800-334-1089.

  To order a replacement diskette outside the U.S., contact your local IBM branch office. Have the 5494 serial number available.

- If the problem occurs with both copies of the system diskette, contact 5494 Service and report the SRC displayed on the right-hand side of the LCD.

CE Action: Look up the SRC that is displayed on the right-hand side of the LCD. See <u>"SRCs" in topic 1.10</u>.

```
020-04
```

Customer and CE Action: Insert the system diskette, and then press **Enter** to continue. Press **Esc** to return to the extended diagnostics main menu.

```
021-xx
```

Customer and CE Action: lists the messages and meanings that describe the installed features of the 5494.

To scroll through the list, press the **up** and **down arrows**. To return to the main menu, press **Esc**.

```
Table 3. Messages
```

Message Code	Description	ID Values
021-01 021-02 021-03 021-04	ID of adapter in slot 1 ID of adapter in slot 2 ID of adapter in slot 3 ID of adapter in slot 4	**E00F** Token-Ring adapter **FEE6** Ethernet adapter **8FF6** Twinaxial adapter ---- Empty slot **** Unrecognized adapter
021-05	Amount of installed storage (megabytes)	
021-06	Version numbers for the planar and operator panel (available only in CE test mode.)	

022-01

Cause: Loading extended diagnostics from diskette.

Customer and CE Action: None.

022-02

Cause: All extended diagnostic tests have completed without detecting any error conditions, or Req has been pressed and the extended diagnostic test that was running has been stopped.

Customer and CE Action: Press **Enter** to return to the main menu.

023-xx

Customer and CE Action: Change the 5494 date or time. See the following table:

Message	Description
023-01	Change or view the current date. Valid range: (91..50):(01..12):(01..31) Valid format: yy:mm:dd
023-02	Change or view the current time. Valid range: (00..23):(00..59):(00..59) Valid format: hh:mm:ss
023-03	The date entered is not valid. Valid range: (91..50):(01..12):(01..31) Valid format: yy:mm:dd Press **Enter** to continue.
023-04	The time entered is not valid. Valid range: (00..23):(00..59):(00..59) Valid format: hh:mm:ss Press **Enter** to continue.

- Press the **left** and **right arrows** to move the cursor.
- Press the numbers to change the value.
- Press **Enter** to save the value and continue.
- Press **Esc** to quit without changing the value.

024-01

Cause: The current data rate for the Token-Ring adapter in the 5494 is shown on the right-hand side of the LCD.

Customer and CE Action: Press the **up** or **down arrow** to scroll to the desired data rate (4 or 16 Mbps), and then press **Enter** to select.

024-02

Cause: 5494 setup is complete.

Customer and CE Action: Press **Enter** to continue.

024-03

Cause: An unrecognized adapter is installed in the 5494.

Customer Action: Contact 5494 Service and report the SRC displayed on the right-hand side of the LCD.

CE Action: Look up the SRC displayed on the right-hand side of the LCD. See "SRCs" in topic 1.10.

024-04

Cause: The current Ethernet media type is displayed on the right-hand side of the LCD.

Customer and CE Action: Press the **up** or **down arrow** to scroll to the desired media type (10BASE2, 10BASE5, or 10BASE-T), and then press **Enter** to select.

024-05

Cause: A new adapter card that is not supported by the microcode was found in the controller. The slot containing the unsupported adapter is identified by the SRC on the right-hand side of the operator panel.

Customer and CE Action: Press **Enter** to proceed with the initialization of the controller. The microcode disables the unsupported adapter.

030-01

Cause: CE main menu.

Customer Action: None.

CE Action: To select from the following functions, press the **up** or **down arrow** and **Enter**, or type the number of the function you wish to select and press **Enter**. Press **Esc** to exit this menu.

Number	Function
1	View 5494 features
2	Test all 5494 hardware Runs extended diagnostics on all hardware.
3	Set date and time Allows the date and time on the internal clock to be changed or viewed.
4	Run setup Initializes the internal descriptions of the installed adapters. If the 5494 contains a Token-Ring adapter, the Token-Ring data rate can be set or changed using the run setup option. Similarly, if the 5494 contains an Ethernet adapter, the media type can be selected or changed using the run setup option.
5	Test selected 5494 hardware Permits selection of specific tests and number of times test is to run.
6	View 5494 error log Allows viewing of the SRCs, and the date and the time associated with errors in the 5494 error log.
7	View storage correction counters Displays the number of corrections to storage made by the 5494 error-correcting circuits.

Press **Enter** to select an option. Press **Esc** to exit extended diagnostics and restart the 5494.

030-02

Cause: Extended diagnostic test selection menu.

Customer Action: None.

CE Action: The right-hand side of the LCD displays the numbers 1 through 7 that correspond to the tests that can be selected. The following numbers that correspond to the available tests are:

```
 _____
|            1 2 3 4 5 6 7|
|_____ _ _ _ _ _ _ _ _ |
          | | | | | | | |
```

```
        | | | | | | Ethernet adapter (if installed)
        | | | | | Token-Ring adapter (if installed)
        | | | | Host-twinaxial adapter
        | | | Operator panel
        | | Diskette drive
        | Storage
        Planar
```

Active keys:

- 1 to 7 toggle the test selection between on and off. Press the number to toggle between select and not select. The "-" indicates that the test is not selected to run.

- **Esc** to return to the previous menu.

- **Enter** to go to the test options menu.

030-03

Cause: Test options menu.

Customer Action: None.

CE Action: To select from the following options, press the **up** or **down arrow** and press **Enter**, or type the number of the option and press **Enter**. Enter one of the following options:

1
   Run all selected tests once (default).
2
   Run all selected tests until an error is detected.
3
   Run all selected tests until Req is pressed. Any detected errors will be logged in the 5494 error log.

Active keys:

- **Enter** to select the option displayed on the LCD

- **Esc** to return to the CE main menu.

030-04

Cause: All extended diagnostic tests have completed without detecting any errors, or Req has been pressed and the extended diagnostic test that was running has been stopped.

Customer Action: None.

CE Action: Press **Enter** to return to the main menu.

Note: Because no errors were detected, it is recommended that you select option 6 on the CE main menu to view the 5494 error log for an entry that might help in resolving the problem.

030—05

Cause: All 5494 tests have completed.

Customer Action: None.

CE Action: Press **Enter** to return to the main menu.

Note: You can view errors that were detected during these tests by selecting option 6 on the CE main menu.

030—06

Cause: Are you sure that you want to exit and restart the 5494?

Customer and CE Action: Press **Enter** to exit and restart the 5494. Press **Esc** to return to the extended diagnostics main menu.

031-01

Cause: The planar test is running. Do not turn the 5494 power **OFF** (**0**) or restart the 5494 during this test.

Customer Action: None.

CE Action: Pressing Req will stop the test.

Note: During some portions of the planar test, communication with the operator panel is not available. Therefore, you may need to press Req several times to stop the test. After you press Req, it can take several seconds before the test terminates.

031-02

Cause: An error has been detected.

Customer Action: Contact 5494 Service and report the SRC displayed on the right-hand side of the LCD.

CE Action: Look up the SRC displayed on the right-hand side of the LCD. See <u>"SRCs" in topic 1.10</u>. Press **Enter** to continue.

032-01

Cause: The storage test is running. This test may take up to 2 minutes.

Customer Action: None.

CE Action: Pressing Req will stop the test.

Note: After you press Req, it can take several seconds before the test terminates.

032-02

Cause: An error has been detected.

Customer Action: Contact 5494 Service and report the SRC displayed on the right-hand side of the LCD.

CE Action: Look up the SRC displayed on the right-hand side of the LCD. See "SRCs" in topic 1.10. Press **Enter** to continue.

033-01

Cause: The diskette drive test is running.

Customer Action: None.

CE Action: Pressing Req will stop the test.

Note: After you press Req, it can take several seconds before the test terminates.

033-02

Cause: Verify that the system diskette is **not** write-protected.

Customer and CE Action: Remove the system diskette and verify that the tab on the diskette is pushed to the top of the slot and that the opening in the slot is covered by the tab. Reinsert the diskette in the diskette drive, and then press **Enter** to continue.

033-03

Cause: Set the system diskette to write-protected.

Customer and CE Action: Remove the system diskette and push the tab on the diskette to the bottom of the slot so that the area above the tab is open. Reinsert the diskette in the diskette drive, and then press **Enter** to continue.

033–04

Cause: Set the system diskette to **not** write-protected.

Customer and CE Action: Remove the system diskette. Slide the write-protect tab to the write position. (The tab is pushed to the top of the slot and the opening in the slot is covered by the tab.) Reinsert the diskette in the diskette drive, and then press **Enter** to continue.

033–05

Cause: An error has been detected while testing the system diskette and the diskette drive. The problem may be a defective system diskette.

Customer Action: Replace the installed system diskette with a backup copy of the system diskette, and then press **Enter** to run the diskette test again. Remember to order a replacement diskette if the problem is with the system diskette.

To order a replacement diskette in the U.S., call 1-800-334-1089.

To order a replacement diskette outside the U.S., contact your local IBM branch office. Have the 5494 serial number available.

If this error occurs after replacing the system diskette with the backup, contact 5494 Service and report the SRC displayed on the right-hand side of the LCD.

CE Action: Replace the installed system diskette with a backup copy of the system diskette, and then press **Enter** to run the diskette test again. Remember to order a replacement diskette if the problem is with the system diskette.

To order a replacement diskette in the U.S., call 1-800-334-1089.

To order a replacement diskette outside the U.S., contact your local IBM branch office. Have the 5494 serial number available.

If this error occurs after replacing the system diskette with the backup, the diskette drive must be replaced.

033-06

Cause: 5494 failure.

Customer Action: Contact 5494 Service and report the SRC displayed on the right-hand side of the LCD.

CE Action: Look up the SRC displayed on the right-hand side of the LCD. See "SRCs" in topic 1.10.

034-01

Cause: The operator panel test is running. The first part of the test causes the operator panel to be reset. The LEDs flash and the message 001-01 is displayed on the right-hand side of the LCD for a few seconds.

Customer and CE Action: None.

034-02

Cause: Manual keypad test.

Customer and CE Action:

1. Press all keys on the keypad **except** *Enter* and *Alt*.
2. Press **Alt+PF1** to test the Alt key. Do not press PF2.
3. Press **Enter** twice.

034-03

Cause: Operator panel LCD test. Three different patterns are shown repeatedly on the LCD.

1. The LCD displays all dots.
2. The LCD is blank.
3. The LCD displays the numbers 0 through 9, and the letters A through F.

Customer and CE Action:

1. Press **Enter** to begin the test.

2. Watch the LCD to determine if the sequence is correct.

3. If the pattern displayed is correct, type **1**. If the pattern is **not** correct, type **0**.

034-04

Cause: Operator Panel LED test. Each LED is turned on and then off from bottom to top, and then from bottom to top again.

Customer and CE Action:

1. Press **Enter** to begin the test.

2. Watch the LEDs to determine if the LED sequence is correct. Only one LED should be **ON** at a time.

3. If the sequence is correct, type **1**. If the sequence is **not** correct, type **0**.

034-05

Cause: An error has been detected.

Customer Action: Contact 5494 Service and report the SRC displayed on the right-hand side of the LCD. Press **Enter** to continue.

CE Action: Look up the SRC displayed on the right-hand side of the LCD. See ["SRCs" in topic 1.10](#). Press **Enter** to continue.

```
035-01
```

Cause: Twinaxial adapter test is running.

Pressing Req will stop the test.

Note: After you press Req, it can take several seconds before the test terminates.

Customer and CE Action: None.

```
035-02
```

Cause: 5494 failure.

Customer Action: Contact 5494 Service and report the SRC displayed on the right-hand side of the LCD.

CE Action: Look up the SRC displayed on the right-hand side of the LCD. See ["SRCs" in topic 1.10](#).

```
036-01
```

Cause: Select the type of Token-Ring cable to which this 5494 is attached.

Customer and CE Action:

- Type **1** and press **Enter** if the cable is an IBM Token-Ring adapter cable.

- Type **2** and press **Enter** if the cable is a type-3 media filter cable.

036-02

Cause: Is the wrap plug that attaches to the Token-Ring adapter when the cable is disconnected available for use?

CE Action:

- If yes, type **1** and press **Enter**.
- If no, type **0** and press **Enter**.

036-03

Customer and CE Action: Disconnect the Token-Ring adapter cable from the Token-Ring network. Leave the other end of the cable connected to the 5494 Token-Ring adapter. Press **Enter** when the cable is disconnected.

036—04

Customer and CE Action: Disconnect the cable from the Token-Ring adapter and replace it with a wrap plug. Press **Enter** when the wrap plug is installed.

036—05

Cause: Testing the Token-Ring adapter. This can take up to 2 minutes.

Customer and CE Action: Press **Req** to return to the extended diagnostics main menu.

Note: This test may not terminate immediately.

   036−06

Cause: No Token-Ring adapter errors were detected.

Customer and CE Action: Remove the wrap plug and reconnect the Token-Ring adapter cable to the 5494 and the Token-Ring network. Press **Enter** when the cable is connected.

   036−07

Cause: No Token-Ring errors were detected. Because no wrap plug was installed on the Token-Ring adapter, a complete test was not possible. A 5494 failure may not have been detected.

Customer and CE Action: Press **Enter** to continue.

   036−08

Customer and CE Action: Remove the wrap plug from the Token-Ring adapter. Press **Enter** to continue.

   036−09

Cause: An error has been detected.

Customer Action: Contact 5494 Service and report the SRC displayed on the right-hand side of the LCD. Then, press **Enter** to continue.

CE Action: Look up the SRC displayed on the right-hand side of the LCD and perform the indicated action. See <u>"SRCs" in topic 1.10</u>. Then press **Enter** to continue.

036–10

Cause: No token-ring errors were detected.

Customer and CE Action: Reconnect the Token-Ring adapter to the Token-Ring network. Press **Enter** after the cable is reconnected.

037–01

Cause: Is the Ethernet adapter connected to a functional Ethernet network?

CE Action:

- If **Yes**, type **1** and press **Enter**.
- If **No**, type **0** and press **Enter**.

037-02

Cause: The Ethernet adapter is being tested; this can take up to two minutes.

Customer and CE Action: Press **Req** to return to the extended diagnostics main menu before the test is completed.

037–03

Cause: An Ethernet adapter error has been detected.

Customer Action: Contact 5494 Service and report the SRC displayed on the right-hand side of the LCD. Then, press **Enter** to continue.

CE Action: Make sure that the extended diagnostic test for the Ethernet adapter has been started from the CE main menu. Press **Alt+PF1** to access the CE main menu. Look up the SRC displayed on the right-hand

side of the display and perform the indicated action. See <u>"SRCs" in topic 1.10</u>. Then, press **Enter** to continue.

050–01

Cause: View 5494 error log.

Customer Action: None.

CE Action: Press **Enter** to display the error most recently entered in the 5494 error log. See <u>"How to View the Error Log" in topic 1.9</u> for instructions.

050–02

Cause: One or more entries in the 5494 error log do not have a valid time stamp. Asterisks (*) will be substituted for an incorrect date and time. The problem is probably due to an error that occurred with the 5494 clock when the error was logged. This problem does not prevent normal 5494 operation except that no time or date will be recorded for this error log entry.

Customer Action: None.

CE Action: Press **Enter** to display the error most recently entered in the 5494 error log. See <u>"How to View the Error Log" in topic 1.9</u> for instructions.

1.9 How to View the Error Log

To access the information stored in the 5494 error log, imagine that the log is like a sheet of paper with one line used for each log entry. The most recent entry is located at the bottom of the paper.

At the top of the paper is an overlay with a clear window through which you can view a small portion of each error log entry at a time. You can move the overlay to the left or the right to view different information about a single entry, or up and down to view different error log entries. Consider the right-

hand side of the LCD as the window. The left-hand side of the LCD contains a message code that indicates what you are seeing through the window.

Table 4 shows the format of the 5494 error log.

```
┌─────────────────────────────────────────────────────────────────────┐
│  Table 4. Format of the 5494 Error Log                               │
├────────────┬───────────┬───────────┬───────────┬────────────────────┤
│            │           │           │           │  Optional          │
│  Entry     │           │           │  SRC      │  Status            │
│  Number    │  Date     │  Time     │  (Slot)   │  Bytes             │
├────────────┼───────────┼───────────┼───────────┼────────────────────┤
│  (42/42)   │  dd mmm   │  hh:mm:ss │  cccccc(s)│  1 xx   2 xx       │
│            │           │           │           │  ...               │
├────────────┼───────────┼───────────┼───────────┼────────────────────┤
│  ...       │  ...      │  ...      │  ...      │  ... ...           │
├────────────┼───────────┼───────────┼───────────┼────────────────────┤
│  3/42      │  dd mmm   │  hh:mm:ss │  cccccc(s)│  1 xx   2 xx       │
├────────────┼───────────┼───────────┼───────────┼────────────────────┤
│  2/42      │  dd mmm   │  hh:mm:ss │  cccccc(s)│  1 xx   2 xx       │
├────────────┼───────────┼───────────┼───────────┼────────────────────┤
│  1/42      │  dd mmm   │  hh:mm:ss │  cccccc(s)│  1 xx   2 xx       │
└────────────┴───────────┴───────────┴───────────┴────────────────────┘
```

The message codes 051-xx indicate the fields of information displayed on the 5494 LCD.

The LCD initially shows the SRC for the last entry in the 5494 error log (**cccccc(s)** in Table 4). Use the arrow keys to move the window to other entries and fields. A beep is sounded when the end of the error log has been reached.

   Notes:

1. For hardware SRCs E00xxx, look up the last 3 digits in "SRCs" in topic 1.10.

2. Four-digit SRCs will display as 6-digit SRCs with 2 leading zeros (for example, 000052).

In addition, you can use:

PF1
   To display momentarily the count field for the entry currently displayed. When the same error occurs more than once, a count is incremented instead of creating a new error log entry. The date and time of the error log entry is that of the last occurrence.

PF2

To find the first entry for the current date being displayed. If the first entry for the current date is already being displayed, the first entry for the previous date will be displayed. In either case, the date field will be displayed.

Alt+4

To enable display of additional status bytes associated with each error log entry. This information may be required by level 1 and 2 support personnel.

051-xx

Cause: The message codes 051-01 through 051-05 indicate which of several fields of the 5494 error log is being displayed on the right-hand side of the LCD.

Message Displays
051-01
    The error count
051-02
    The date
051-03
    The time
051-04
    The SRC (see notes)
051-05
    Optional status byte information

Customer and CE Action: Use the **left** and **right arrows** to move between fields.

   Notes:

1. For hardware SRCs E00xxx, look up the last 3 digits in "SRCs" in topic 1.10.

2. Four-digit SRCs will display as 6-digit SRCs with 2 leading zeros (for example 000052).

052-01

Cause: The 5494 error log does not contain any entries.

Customer and CE Action: Press **Esc** to return to the main menu.

052-02

Cause: The 5494 error log contents have been corrupted. A test of the log has been run and no hardware failure was detected. The reason for the problem cannot be detected.

The log has been reinitialized and now contains no errors.

Customer and CE Action: Press **Esc** to return to the main menu.

052-03

Cause: The storage used to store the 5494 error log is defective.

Customer Action: Contact 5494 Service and report the SRC displayed on the right-hand side of the LCD.

Note: You can continue to use the 5494, but error logging information may be unreliable.

Press **Esc** to return to the main menu.

CE Action: Look up the SRC displayed on the right-hand side of the LCD. See "SRCs" in topic 1.10.

060-01

Cause: The two numbers displayed on the right-hand side of the LCD indicate the number of storage corrections made to the single inline storage modules (SIMMs) installed in the 5494.

Customer Action: Press **Esc** to return to the main menu.

CE Action:

- If you have just replaced a SIMM in the 5494, change the counters to zero by pressing **Clear**. Then, press **Esc** to return to the main menu.

- If you have not recently replaced a SIMM, press **Esc** to return to the main menu.

099-01

Cause: A system reset request is in progress.

Customer and CE Action: Complete the reset request sequence or press **Esc** to cancel the request.

099-02

Cause: The system reset request is complete.

Customer and CE Action: This restarts the 5494 and interrupts all current activity.

Attention: Notify the users connected to this 5494 that their sessions will be interrupted.

Press **Enter** to continue. Press **Esc** to cancel the request.

099-03

Cause: A reset is in progress.

Customer and CE Action: None.

```
199
```

Cause: A hardware failure has occurred.

Customer Action: Contact 5494 Service and report the SRC displayed on the right-hand side of the LCD.

CE Action: Look up the SRC displayed on the right-hand side of the LCD. See ["SRCs" in topic 1.10](#) and perform the indicated action.

```
200
```

Cause: Request code for displaying 5494 status information.

Customer and CE Action: See ["Displaying 5494 Online Status Information"](#) [in topic 1.11](#).

```
201 through 220
```

Cause: Codes displayed as a result of a request for information.

Customer and CE Action: Press **Esc** to clear the information from the LCD.

While data with these message codes is displayed, normal errors that occur will not display.

```
230
```

Cause: Request code to restart LAN communications.

Customer and CE Action: Press **Enter** to activate or **ESC** to clear.

```
290
```

Cause: Request code to enter concurrent diagnostic mode.

Customer and CE Action: Press **Enter** to activate or **ESC** to clear.

```
291
```

Cause: Request code to exit concurrent diagnostic mode.

Customer and CE Action: Press **Enter** to activate or **ESC** to clear.

```
| 300 through 320
```

| **Cause:** The process for copying 5494 configuration data or a bridge filter
| file is in progress.

Customer Action: Refer to "Transferring Configuration Data to the 5494" in the *IBM 5494 Remote Control Unit User's Guide* to continue, or press **Esc** to cancel the operation.

| **CE Action:** Refer to "Copying 5494 Configuration or Filter Files from
| Diskette." in *IBM 5494 Remote Control Unit Maintenance Information* to continue, or press **Esc** to cancel the operation.

```
351
```

Cause: A system diskette problem was detected.

Customer Action: Record the SRC displayed on the right-hand side of the LCD. Then, refer to the SRC section of the *IBM 5494 Remote Control Unit User's Guide* and perform the indicated action.

CE Action: Record the SRC displayed on the right-hand side of the LCD. Then, refer to the SRC section of *IBM 5494 Remote Control Unit Maintenance Information* and perform the indicated action.

352

Cause: A configuration problem was detected.

Customer Action: Record the SRC displayed on the right-hand side of the LCD. Then, refer to the SRC section of the *IBM 5494 Remote Control Unit User's Guide* and perform the indicated action.

CE Action: Record the SRC displayed on the right-hand side of the LCD. Then, refer to the SRC section of *IBM 5494 Remote Control Unit Maintenance Information* and perform the indicated action.

355

Cause: A diskette write-protected error was detected.

Customer Action: Record the SRC displayed on the right-hand side of the LCD. Then, refer to the SRC section of the *IBM 5494 Remote Control Unit User's Guide* and perform the indicated action.

CE Action: Record the SRC displayed on the right-hand side of the LCD. Then, refer to the SRC section of *IBM 5494 Remote Control Unit Maintenance Information* and perform the indicated action.

356

Cause: A diskette write error was detected.

Customer Action: Record the SRC displayed on the right-hand side of the LCD. Then, refer to the SRC section of the *IBM 5494 Remote Control Unit User's Guide* and perform the indicated action.

CE Action: Record the SRC displayed on the right-hand side of the LCD. Then, refer to the SRC section of *IBM 5494 Remote Control Unit Maintenance Information* and perform the indicated action.

359

Cause: Incorrect configuration data was detected.

Customer Action: Record the SRC displayed on the right-hand side of the LCD. Then, refer to the SRC section of the *IBM 5494 Remote Control Unit User's Guide* and perform the indicated action.

CE Action: Record the SRC displayed on the right-hand side of the LCD. Then, refer to the SRC section of *IBM 5494 Remote Control Unit Maintenance Information* and perform the indicated action.

361

Cause: A configuration problem was found.

Customer Action: Record the SRC displayed on the right-hand side of the LCD. Then, refer to the SRC section of the *IBM 5494 Remote Control Unit User's Guide* and perform the indicated action.

CE Action: Record the SRC displayed on the right-hand side of the LCD. Then, refer to the SRC section of *IBM 5494 Remote Control Unit Maintenance Information* and perform the indicated action.

363

Cause: An Application System/400 (AS/400)-system communication problem was detected.

Customer Action: Record the SRC displayed on the right-hand side of the LCD. Then, refer to the SRC section of the *IBM 5494 Remote Control Unit User's Guide* and perform the indicated action.

CE Action: Record the SRC displayed on the right-hand side of the LCD. Then, refer to the SRC section of *IBM 5494 Remote Control Unit Maintenance Information* and perform the indicated action.

Cause: A Token-Ring or Ethernet adapter problem was detected.

Customer Action: Record the SRC displayed on the right-hand side of the LCD. Then, refer to the SRC section of the *IBM 5494 Remote Control Unit User's Guide* and perform the indicated action.

CE Action: Record the SRC displayed on the right-hand side of the LCD. Then, refer to the SRC section of *IBM 5494 Remote Control Unit Maintenance Information* and perform the indicated action.

410

Cause: A physical link error was detected.

Customer Action: Record the SRC displayed on the right-hand side of the LCD. Then, refer to the SRC section of the *IBM 5494 Remote Control Unit User's Guide* and perform the indicated action.

CE Action: Record the SRC displayed on the right-hand side of the LCD. Then, refer to the SRC section of *IBM 5494 Remote Control Unit Maintenance Information* and perform the indicated action.

420

Cause: An X.25 network error was detected.

Customer Action: Record the SRC displayed on the right-hand side of the LCD. Then, refer to the SRC section of the *IBM 5494 Remote Control Unit User's Guide* and perform the indicated action.

CE Action: Record the SRC displayed on the right-hand side of the LCD. Then, refer to the SRC section of *IBM 5494 Remote Control Unit Maintenance Information* and perform the indicated action.

430

Cause: An X.21 network error was detected.

Customer Action: Record the SRC displayed on the right-hand side of the LCD. Then, refer to the SRC section of the *IBM 5494 Remote Control Unit User's Guide* and perform the indicated action.

CE Action: Record the SRC displayed on the right-hand side of the LCD. Then, refer to the SRC section of *IBM 5494 Remote Control Unit Maintenance Information* and perform the indicated action.

440

Cause: A V.25 bis error was detected.

Customer Action: Record the SRC displayed on the right-hand side of the LCD. Then, refer to the SRC section of the *IBM 5494 Remote Control Unit User's Guide* and perform the indicated action.

CE Action: Record the SRC displayed on the right-hand side of the LCD. Then, refer to the SRC section of *IBM 5494 Remote Control Unit Maintenance Information* and perform the indicated action.

450

Cause: An SNA communication error was detected.

Customer Action: Record the SRC displayed on the right-hand side of the LCD. Then, refer to the SRC section of the *IBM 5494 Remote Control Unit User's Guide* and perform the indicated action.

CE Action: Record the SRC displayed on the right-hand side of the LCD. Then, refer to the SRC section of *IBM 5494 Remote Control Unit Maintenance Information* and perform the indicated action.

460

Cause: A LAN error was detected.

Customer Action: Record the SRC displayed on the right-hand side of the LCD. Then, refer to the SRC section of the *IBM 5494 Remote Control Unit User's Guide* and perform the indicated action.

CE Action: Record the SRC displayed on the right-hand side of the LCD. Then, refer to the SRC section of *IBM 5494 Remote Control Unit Maintenance Information* and perform the indicated action.

470

Cause: A frame-relay error was detected.

Customer Action: Record the SRC displayed on the right-hand side of the LCD. Then, refer to the SRC section of the *IBM 5494 Remote Control Unit User's Guide* and perform the indicated action.

CE Action: Record the SRC displayed on the right-hand side of the LCD. Then, refer to the SRC section of the *IBM 5494 Remote Control Unit Maintenance Information* and perform the indicated action.

| **480**

| **Cause:** A Frame Relay Token-Ring Bridge error has been detected.

| **Customer Action:** Record the SRC displayed on the right-hand side of the
| LCD. Then, refer to the SRC section of the *IBM 5494 Remote Control Unit*
| *User's Guide* and perform the indicated action.

| **CE Action:** Record the SRC displayed on the right-hand side of the LCD.
| Then, refer to the SRC section of the *IBM 5494 Remote Control Unit*
| *Maintenance Information* and perform the indicated action.

710

Cause: A code change file problem was detected.

Customer Action: Record the SRC displayed on the right-hand side of the LCD. Then, refer to the SRC section of the *IBM 5494 Remote Control Unit User's Guide* and perform the indicated action.

CE Action: Record the SRC displayed on the right-hand side of the LCD. Then, refer to the SRC section of *IBM 5494 Remote Control Unit Maintenance Information* and perform the indicated action.

720

Cause: A failure in the operational code has been detected.

Customer Action: Contact 5494 Service and report the SRC displayed on the right-hand side of the LCD.

CE Action: Write down the SRC, then contact 5494 Support and report a code problem.

721

Cause: The controller attempted to write an error dump file to the 5494 system diskette because of a failure in the operational microcode. However, the 5494 system diskette was damaged or missing.

Customer Action: Write down the SRC displayed on the operator panel. Insert a 5494 system diskette into the controller and press **Enter** to attempt to write the error dump file again. Contact 5494 service and report the SRC.

CE Action: Write down the SRC displayed on the operator panel. Insert a 5494 system diskette into the controller and press **Enter** to attempt to write the error dump file again. Contact 5494 support and report the SRC.

The 5494 reinitializes after the error dump file is written.

Pressing **Esc** bypasses the writing of the error dump file, and the controller immediately reinitializes if a 5494 system diskette is in the controller.

Cause: The controller attempted to write an error dump file to the 5494 system diskette because of a failure in the operational microcode. However, the 5494 system diskette was write-protected.

Note: The 5494 reinitializes automatically after approximately two minutes if no action is taken.

Customer Action: Write down the SRC displayed on the operator panel. Close the write-protect tab on the 5494 system diskette. Press **Enter** to attempt to write to the error dump file again. Contact 5494 service and report the SRC.

The 5494 reinitializes after the error dump file is written.

CE Action: Write down the SRC displayed on the operator panel. Close the write-protect tab on the 5494 system diskette. Press **Enter** to attempt to write to the error dump file again. Contact 5494 support and report the SRC.

The 5494 reinitializes after the error dump file is written.

Pressing **Esc** bypasses the writing of the error dump file, and the controller immediately reinitializes.

Cause: A failure in the operational code has been detected. The 5494 has reinitialized itself and resumed operations

Customer Action: Contact 5494 Service and report the SRC displayed on the right-hand side of the LCD.

CE Action: Write down the SRC, including the asterisks (*). Then, contact 5494 Support and report a code problem.


Cause: An incorrect request code has been entered by the user.

Customer and CE Action: Press **Esc** to clear. To try the operation again, press **Req**, type a valid request code, and press **Enter**. See <u>"Summary of</u> <u>Concurrent Mode Request Codes" in topic 1.13</u> for a list of the valid request codes.

1.10 SRCs

SRCs are displayed on the right-hand side of the LCD and indicate the failure of a field-replaceable unit (FRU) or an action required to resolve a problem. SRCs can range from 3 to 6 digits and can be generated by a POST, extended diagnostics, or the operational code.

```
 _____
|              aaa(s)  |
|_____  _____|
               |
               |
              SRC
```
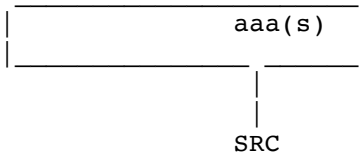
```
 ___ Important _____
|                                                                  |
| This section contains only 3-digit hardware SRCs.  No 4- to 6-digit |
| SRCs are included in this book.                                  |
|                                                                  |
|                                                                  |
| Customer:  Refer to the SRC section of the IBM 5494 Remote Control |
| Unit User's Guide for the other SRCs.                            |
|                                                                  |
|                                                                  |
| CE:  Refer to the SRC section of IBM 5494 Remote Control Unit    |
| Maintenance Information for the other SRCs.                      |
|                                                                  |
|_____|
```

    The 3-digit hardware SRCs can be followed by 1 or 2 numbers in
    parentheses. These numbers indicate which of several identical FRUs is
    causing the failing condition, or which of several slots, ports, or cable
    types are associated with the defective FRU.

Note: The following 3-digit hardware SRCs are displayed in the 5494 error log as E00xxx.

SRC 100

Customer Action: Contact 5494 Service. Report this SRC.

CE Action: Replace the planar.

SRC 101(s)

Customer Action: Contact 5494 Service. Report this SRC.

CE Action: Replace the SIMM installed in slot **s**. If an asterisk (*) is displayed, replace both SIMMs.

SRC 102

Customer Action: Contact 5494 Service. Report this SRC.

CE Action: Replace the operator panel. Be sure to order the correct keypad overlay for the replacement panel.

SRC 105

Customer Action: Contact 5494 Service. Report this SRC.

CE Action: Replace the power supply.

SRC 106

Customer Action: Contact 5494 Service. Report this SRC.

CE Action: Replace the diskette drive.

```
SRC 108(s)
```

Customer Action: Contact 5494 Service. Report this SRC.

CE Action: Replace the host-twinaxial adapter in slot **s**.

```
SRC 109(s)
```

Customer Action: Contact 5494 Service. Report this SRC.

CE Action: Replace the Token-Ring adapter in slot **s**.

```
SRC 111(s,c)
```

Customer Action: Contact 5494 Service. Report this SRC.

CE Action: Replace the 5494 host communication cable attached to the adapter in slot **s** (*c* indicates the cable type).

If *c*=
1 X.21
2 V.35
3 EIA 232D

SRC 113

Customer and CE Action: Remove the system diskette. Insert the backup copy of the 5494 system diskette, and then press **Enter** to try again. If the backup diskette loads successfully, order a new system diskette to replace the damaged one.

To order a replacement diskette in the U.S., call 1-800-334-1089.

To order a replacement diskette outside the U.S., contact your local IBM branch office. Have the 5494 serial number available.

SRC 114(s)

Customer Action: Contact 5494 Service. Report this SRC.

CE Action: Replace the adapter installed in slot **s**.

SRC 115

Customer Action: Turn the 5494 power **OFF (0)**, and then back **ON (l)**. If the problem reoccurs, contact 5494 Service and report this SRC.

CE Action: This is the result of a timing problem between the planar and an adapter installed in the 5494. Replace and verify the adapters one at a time. If this does not solve the problem, replace the planar. Be sure to reinstall the adapters that have been verified as operating correctly.

SRC 116

Customer Action: Turn the 5494 power **OFF (0)**, and then back **ON (l)**. If the problem recurs, contact 5494 Service and report this SRC.

CE Action: This is probably due to a hardware problem, but could also be due to a code problem. Replace and verify the adapters one at a time. If this does not solve the problem, replace the planar. Be sure to reinstall the adapters that have been verified as operating correctly.

If the problem continues to occur, contact 5494 Support.

SRC 117

Customer Action: Turn the 5494 power **OFF** (**0**), and then back **ON** (**l**). If the problem reoccurs, contact 5494 Service and report this SRC.

CE Action: This is the result of a timing problem between the planar and an adapter installed in the 5494. Replace and verify the adapters one at a time. If this does not solve the problem, replace the planar. Be sure to reinstall the adapters that have been verified as operating correctly.

SRC 119

Customer Action: A power disturbance has caused the 5494 to turn the power **OFF** (**0**). This SRC is logged in the 5494 error log as E00119. If external power variations are not suspected (the 5494 shuts down), contact 5494 Service and report this SRC.

CE Action: If external power variations are not suspected, replace the power supply.

SRC 120

Customer and CE Action: The information stored in the 5494 about the installed adapters and features does not match that determined by POST. This condition can result when adapters or features have just been installed, removed, or changed, or if there has been a failure in the
| 5494. Press the Enter key on the 5494 keypad and follow the message codes
| to run setup.

SRC 122

Customer Action: Move the write-protect tab on the system diskette to the write position (the tab is covering the opening in the slot). If the write-protect tab is already in the write position, contact 5494 Service and report this SRC.

CE Action: Move the write-protect tab on the system diskette to the write position (the tab is covering the opening in the slot). If the tab is already in the write position, replace the diskette drive.

SRC 123

Customer and CE Action: Set the date and time using extended diagnostics. See ["Running Extended Diagnostics" in topic 1.6](#) to begin extended diagnostics, and then, following the message codes, set the date and time.

```
SRC 124
```

Customer Action: The system diskette may be damaged. Install the backup copy of the system diskette and restart the 5494. If this error occurs with the backup system diskette, contact 5494 Service and report this SRC.

CE Action: The system diskette may be damaged or a microcode problem may be occurring. If this error occurs with the backup system diskette installed, replace the diskette drive. If the problem still occurs, contact 5494 Support.

```
SRC 125
```

Customer Action: The system diskette may be damaged. Install the backup copy of the system diskette and restart the 5494. If this error occurs with the backup system diskette, contact 5494 Service and report this SRC.

CE Action: There may be a problem reading the system diskette, or a microcode error may be occurring. If this error occurs with the backup system diskette, replace the diskette drive. If the problem continues to occur, contact 5494 Support.

```
SRC 130(s)
```

Customer Action: Contact 5494 Service. Report this SRC.

CE Action: Replace the planar. If this does not solve the problem, reinstall the planar and replace the SIMM in
slot **s**.

```
SRC 131(s)
```

Customer Action: Contact 5494 Service. Report this SRC.

CE Action: Replace the SIMM in slot **s**. If this does not solve the problem, reinstall the SIMM and replace the planar.

SRC 132

Customer Action: Contact 5494 Service. Report this SRC.

CE Action: Replace the planar. If this does not solve the problem, reinstall the planar and replace the operator panel.

SRC 133

Customer Action: Contact 5494 Service. Report this SRC.

CE Action: Turn the 5494 power **OFF** (**0**), and then back **ON** (**l**). Listen for the number of beeps as the 5494 performs the POST.

If, after 1 minute, no beeps occur, replace the planar. Otherwise, replace the operator panel first. If this does not solve the problem, then replace the planar.

SRC 138

Customer Action: Contact 5494 Service. Report this SRC.

CE Action: Replace the planar. If this does not solve the problem, reinstall the planar and replace the power supply.

SRC 139

Customer Action: Contact 5494 Service. Report this SRC.

CE Action: Replace the power supply. If this does not solve the problem, reinstall the power supply and replace the planar.

SRC 140

Customer Action: Contact 5494 Service. Report this SRC.

CE Action: Replace the planar. If this does not solve the problem, reinstall the planar and replace the diskette drive.

SRC 141

Customer Action: Contact 5494 Service. Report this SRC.

CE Action: Replace the diskette drive. If this does not solve the problem, reinstall the diskette drive and replace the planar.

SRC 143

Customer Action: Contact 5494 Service. Report this SRC.

CE Action: Replace the system diskette. If this does not solve the problem, replace the diskette drive. If this does not solve the problem, reinstall the diskette drive and replace the planar.

SRC 146

Customer Action: Contact 5494 Service. Report this SRC.

CE Action: Replace the planar. If this does not solve the problem, reinstall the planar and replace the Token-Ring adapter.

SRC 147(s)

Customer Action: Contact 5494 Service. Report this SRC.

CE Action: Replace the Token-Ring adapter in slot **s**. If this does not solve the problem, reinstall the Token-Ring adapter and replace the planar.

SRC 148(s)

Customer Action: Contact 5494 Service. Report this SRC.

CE Action: Replace the planar. If this does not solve the problem, reinstall the planar and replace the host-twinaxial adapter in slot **s**.

SRC 149(s)

Customer Action: Contact 5494 Service. Report this SRC.

CE Action: Replace the host-twinaxial adapter in slot **s**. If this does not solve the problem, reinstall the host-twinaxial adapter and replace the planar.

SRC 150(s)

Customer Action: Contact 5494 Service. Report this SRC.

CE Action: Replace the host-twinaxial adapter in slot **s**. If this does not solve the problem, reinstall the host-twinaxial adapter and replace the twinaxial workstation attachment cable.

`SRC 151(s)`

Customer Action: Contact 5494 Service. Report this SRC.

CE Action: Replace the twinaxial workstation attachment cable connected to the adapter in slot **s**. If this does not solve the problem, reinstall the twinaxial workstation attachment cable and replace the host-twinaxial adapter in slot **s**.

`| SRC 152(s,p) Cable Failure`

| **Customer and CE Action:** Isolate the problem as follows:

1. Turn the 5494 power **OFF** (**0**). Remove the cable connected to port **p** (See Table 5.). Then, turn the 5494 power back **ON** (**l**). If this error code does not reappear, repair or replace the cable.
2. | If the problem continues:

   ○ | Customers - Contact 5494 Service. Report this SRC.

   ○ | CE - Replace the host-twinaxial adapter in slot **s**.

| **Note:** The customer may choose to operate the 5494 with these cabling
| problems until these cabling problems are repaired. To do so, press the
| **Enter** key on the 5494 keypad. Message `002-05|` `.......` `0` appears. Type **1**
| to select IPL in normal mode and press **Enter**. The 5494 attempts to use
| all the twinaxial ports and will log any resulting errors.

Table 5. Port Table	
p =	**Port to which failing cable is connected:**
1	Port 0 or Port 4
2	Port 1 or Port 5
3	Ports 0 and 1 or Ports 4 and 5
4	Port 2 or Port 6
5	Ports 0 and 2 or Ports 4 and 6

6	Ports 1 and 2 or Ports 5 and 6
7	Ports 0, 1, and 2 or Ports 4, 5, and 6
8	Port 3 or Port 7
9	Ports 0 and 3 or Ports 4 and 7
A	Ports 1 and 3 or Ports 5 and 7
B	Ports 0, 1, and 3 or Ports 4, 5, and 7
C	Ports 2 and 3 or Ports 6 and 7
D	Ports 0, 2, and 3 or Ports 4, 6, and 7
E	Ports 1, 2, and 3 or Ports 5, 6, and 7
F	Ports 0, 1, 2, and 3 or Ports 4, 5, 6, and 7

SRC 153(s,p)

Customer Action: Contact 5494 Service. Report this SRC.

CE Action: Replace the twinaxial workstation attachment cable connected to the adapter in slot **s**. If this does not solve the problem, reinstall the twinaxial workstation attachment cable and replace the twinaxial cable connected to port **p**. (See Table 5.)

SRC 154(s,p)

Customer Action: Contact 5494 Service. Report this SRC.

CE Action: Replace the twinaxial cable connected to port **p**. (See Table 5 in topic 1.10.) If this does not solve the problem, reinstall the twinaxial cable and replace the twinaxial workstation attachment cable connected to the adapter in slot **s**.

SRC 155(s,p)

Customer Action: Contact 5494 Service. Report this SRC.

CE Action: Replace the twinaxial workstation attachment cable connected to the adapter in slot **s**. If this does not solve the problem, reinstall the twinaxial workstation attachment cable, and then replace the

twinaxial cable connected to port **p**. (See [Table 5 in topic 1.10](#).) If the problem continues to occur, reinstall the twinaxial cable and replace the host-twinaxial adapter in slot **s**.

```
SRC 156(s,c)
```

Customer Action: Contact 5494 Service. Report this SRC.

CE Action: Replace the host-twinaxial adapter in slot **s**. If this does not solve the problem, reinstall the host-twinaxial adapter and replace the communication cable (c indicates the cable type).

If $c=$
    1 X.21
    2 V.35
    3 EIA 232D

SRC 157(s,c)

Customer Action: Contact 5494 Service. Report this SRC.

CE Action: Replace the communication cable (c indicates the cable type).

If $c=$
    1 X.21
    2 V.35
    3 EIA 232D

If this does not solve the problem, reinstall the communication cable and replace the host-twinaxial adapter in slot **s**.

SRC 158(s)

Customer Action: Contact 5494 Service. Report this SRC.

CE Action: Replace the Token-Ring adapter in slot **s**. If this does not solve the problem, reinstall the Token-Ring adapter and replace the Token-Ring cable.

SRC 159(s)

Customer Action: Contact 5494 Service. Report this SRC.

CE Action: Replace the Token-Ring cable connected to the adapter in slot **s**. If this does not solve the problem, reinstall the Token-Ring cable and replace the Token-Ring adapter.

SRC 160

Customer Action: Contact 5494 Service. Report this SRC.

CE Action: Replace the planar. If this does not solve the problem, replace the power supply, and then, if necessary, replace the diskette drive. Be sure to reinstall the FRUs that have been verified as operating correctly.

SRC 161

Customer Action: Contact 5494 Service. Report this SRC.

CE Action: Replace the power supply. If this does not solve the problem, reinstall the power supply and replace the diskette drive, and then, if necessary, replace the planar. Be sure to reinstall the FRUs that have been verified as operating correctly.

SRC 162

Customer Action: Contact 5494 Service. Report this SRC.

CE Action: Replace the diskette drive. If this does not solve the problem, reinstall the diskette drive and replace the power supply, and then, if necessary, replace the planar. Be sure to reinstall the FRUs that have been verified as operating correctly.

SRC 166(s,c)

Customer Action: Contact 5494 Service. Report this SRC.

CE Action: Replace the host-twinaxial adapter in slot **s**. If this does not solve the problem, replace the communication cable (*c* indicates the cable type).

If *c=*
    1 X.21
    2 V.35
    3 EIA 232D

If the problem persists, replace the power supply, and then, if necessary, replace the planar. Be sure to reinstall the FRUs that have been verified as operating correctly.

SRC 167(s,c)

Customer Action: Contact 5494 Service. Report this SRC.

CE Action: Replace the power supply. If this does not solve the problem, reinstall the power supply and replace the communication cable (*c* indicates the cable type).

If *c=*
    1 X.21
    2 V.35
    3 EIA 232D

If the problem persists, reinstall the communication cable and replace the host-twinaxial adapter in slot **s**.

SRC 168(s)

Customer Action: Contact 5494 Service. Report this SRC.

CE Action: Replace the adapter installed in slot **s**. If this does not solve the problem, reinstall the adapter installed in slot **s** and replace the planar.

SRC 169

Customer Action: Contact 5494 Service. Report this SRC.

CE Action: Beginning with the adapter in slot 1, replace each adapter. If this does not solve the problem, replace the planar. Reinstall the FRUs that have been verified as operating correctly.

170(s)

Cause: Hardware Failure

Customer Action: Contact 5494 Service. Report this SRC.

CE Action: Replace the Ethernet adapter in slot **s**. If this does not solve the problem, replace the planar and reinstall the Ethernet adapter.

171(s)

Cause: Hardware Failure

Customer Action: Contact 5494 Service. Report this SRC.

CE Action: Replace the Ethernet adapter in slot **s**. If this does not solve the problem, replace the planar and reinstall the Ethernet adapter.

172(s)

Cause: Hardware Failure

CE Action: Verify that the Ethernet adapter in slot **s** is connected to a properly terminated Ethernet network. If so, replace the Ethernet adapter in slot **s**. If this does not solve the problem, replace the planar and reinstall the Ethernet adapter.

174(s)

Cause: A new adapter card that is not supported by the microcode was found in controller slot **s**.

Customer and CE Action: Press **Enter** to proceed with the initialization of the controller. The microcode disables the unsupported adapter.

All 4- to 12-digit SRCs can be found in the following publications:

Customer
　　IBM 5494 Remote Control Unit User's Guide

CE
　　IBM 5494 Remote Control Unit Maintenance Information

1.11 Displaying 5494 Online Status Information

You can request status information at the 5494 keypad. To request status, press **Req**, type **200**, and press **Enter**. The following information is displayed:

200‖ 1"2"3 4"5"

where:

- " indicates yes
-   indicates no

The arrow following the 1 indicates whether ALS communication to the 5494 is active or inactive.

The arrow following the 2 indicates whether any workstation communication to the 5494 is taking place through a twinaxial connection.

The arrow following the 3 indicates whether any workstation communication to the 5494 is taking place through a LAN connection.

The arrow following the 4 indicates whether the 5494 has successfully contacted the target AS/400 system.

The arrow following the 5 indicates whether the 5494 has successfully established the LU 6.2 controller session with the target AS/400 system.

The information is valid when the request is made. To display updated information, press **Req**, type **200**, and press **Enter** again.

Note: When you have finished viewing the information on the LCD, press **Esc** to clear.

1.12 Enabling Workstation Concurrent Mode

```
To enable concurrent mode screens to be viewed from a programmable
workstation (PWS) or nonprogrammable workstation (NWS), press Req, type
290, and press Enter.  The test mode LED will come on.


    Notes:
```

1. Concurrent mode information can also be accessed without enabling workstation concurrent mode by using the 5494 Utility Program and a previously configured password.

2. You cannot view concurrent mode screens when the 5494 is in configuration mode or when the Ready LED is off.

To exit workstation concurrent mode, press **Req**, type **291**, and press **Enter**. The test mode LED will go off.

1.13 Summary of Concurrent Mode Request Codes

```
Requests for information may be made from the operator panel keypad any
```

time the 5494 Ready LED is **ON**. A detailed list of the information
displayed and how to interpret it is in *IBM 5494 Remote Control Unit
Maintenance Information*. is a summary of concurrent mode requests
with the request codes.

Table 6. Concurrent Request Mode Summary	
Request	**Request Code**
Display 5494 status information	Press **Req**, type **200**, and press **Enter.**
Display 5494 configuration	Press **Req**, type **201**, and press **Enter.**
Display upstream communication network	Press **Req**, type **202**, and press **Enter.**
Display 5494 error log	Press **Req**, type **203**, and press **Enter.**
Display 5494 TAC and timeout error counters	Press **Req**, type **204**, and press **Enter.**
Display 5494 communication and statistical counters	Press **Req**, type **205**, and press **Enter.**
Display 5494 communication state byte	Press **Req**, type **206**, and press **Enter.**
Display 5494 SNA state byte for LU 4 and 7	Press **Req**, type **207**, and press **Enter.**
Display 5494 communication interface register	Press **Req**, type **208**, and press **Enter.**
Display 5494 LAN Gateway statistical counters	Press **Req**, type **209**, and press **Enter.**
Display status of 5494 devices attached to twinaxial ports	Press **Req**, type **210**, and press **Enter.**
Display status of 5494 LAN Gateway devices	Press **Req**, type **211**, and press **Enter.**
Display 5494 date and time	Press **Req**, type **212**, and press **Enter.**
Set 5494 date	Press **Req**, type **213**, and press **Enter.**
Set 5494 time	Press **Req**, type **214**, and press **Enter.**
Display status and configuration information for each host	Press **Req**, type **215**, and press **Enter.**
Display 5494 LAN Card permanent address	Press **Req**, type **216**, and press **Enter.**
Display 5494 FR-TR Bridge Counters for the token-ring port	Press **Req**, type **217**, and press **Enter.**
Display 5494 FR-TR Bridge Counters for the frame relay port	Press **Req**, type **218**, and press **Enter.**
Reset 5494 FR-TR Bridge Counters for the token-ring port	Press **Req**, type **219**, and press **Enter.**
Reset 5494 FR-TR Bridge Counters for the frame relay port	Press **Req**, type **220**, and press **Enter.**
Restart LAN communication	Press **Req**, type **230**, and press **Enter.**
Enable workstation concurrent mode	Press **Req**, type **290**, and press **Enter.**
Disable workstation concurrent mode	Press **Req**, type **291**, and press **Enter.**
Copy 5494 configuration or bridge filter file	**Customer:** Refer to "Transferring Configuration Data to the 5494" in the *IBM 5494 Remote Control Unit User's Guide*. **CE:**

```
║│                        ║│   Refer to "Copying 5494
║│                        ║│   Configuration or Filter Files
║│                        ║│ from Diskette" in IBM 5494 Remote
                          Control Unit Maintenance
                          Information.
```

1.14 5494 Publications

- *IBM 5494 Remote Control Unit Planning Guide*, GA27-3936

- *IBM 5494 Remote Control Unit User's Guide*, GA27-3960

- *IBM 5494 Remote Control Unit Functions Reference*, SC30-3533

- *IBM 5494 Remote Control Unit Maintenance Information*, SY27-0327

COMMENTS Topic 2. Tell Us What You Think!

```
5494 Remote Control Unit
Problem Determination Guide
Quick Reference
Release 3.2


Publication No. GA27-3909-05
```

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