Common Problems and Questions About 3151 Terminals

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Special Notices

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This document applies to AIX versions 3.2.3 and later. (AIX 3.2.5 is the latest version at the time of this writing.)

Common Problems

Function Keys Not Working

Function keys may not work for the following reasons:

- AIX requires "Turnaround Character = CR" in Communication Setup menu; the default is ETX.
- Perhaps you are using 3151 Model 510/610 and a host application that requires redefinable function keys. The Model 510/610 DOES NOT support redefinable function keys. Recommend using models 310/410.
- An application (example UNIPLEX) may redefine function keys on models 310/410 and not reset them back to default values when exiting. The host needs to transmit 3151 "Set All Default Function Keys" command (ESC SP t). Operator can reset function keys in DEF F setup by pressing the Clear key.

Insert Key Not Working

If the insert key does not work, change the INSERT CHARACTER setup option from MODE to SPACE.

Double Characters Displayed

If double characters are displayed, change the OPERATING MODE from CHAR to ECHO.

Double Prompt When Enter/Return Key is Pressed

The New Line option must be set to CR, not CR/LF. If it is not, it may cause a double prompt when the Return/Enter key is pressed. The New Line option can be changed either from the setup menus or from the host.

Setup:

- Keyboard setup menu. (Models 110, 310, 410 only)
- Select "Default" in Function setup menu.

Host: Set Control 2 Command: ESC ! 9 (J

3151 Locks Up

If the display locks up:

- Turn on "Status Line" either from keyboard or from setup. This provides additional information. The following items may be displayed on status line:

  HOST BUSY Host told 3151 not to send data to host. Problem must be corrected at host.

  KEYS LOCKED Host sent "Keyboard Lock" command. Host must send "Keyboard Unlock" command. Problem must be corrected at host.

HOLD SCREEN Operator pressed "Hold" or "Pause" key; must press "Hold" or "Pause" key again.

- It may be that the operator accidentally pressed Ctrl-S (XOFF); Press Ctrl-Q (XON) to fix the problem.

3151 Does Not Communicate With Host

If the 3151 does not communicate with the host:

- Turn on "Status Line". If "COMM NOT READY 2" is displayed, change "Line Control" = IPRTS.
- Host cable may be attached to the auxiliary port rather than the main port. The main port is on the right-hand connector ("right hand" as you are looking from the back).
- The Transmit Data, Receive Data pins may not match the host communications port. Check pin configuration on the host system.
- The host system may not have the communications port enabled.
- If the second session is not working with the Connectivity Cartridge in Dual Session by Dual Port, the directions of pins 2 (TD) and 3 (RD) are reversed. Switch pins 2 and 3 on the communications cable attached to the Auxiliary port.

Missing or Lost Characters

Missing or lost characters may be caused by a pacing problem. Reduce line speed to 2400 or 4800 to confirm that the problem is pacing. Activate pacing at the 3151 and the host.

Lost Setup Values

If setup values are lost:

- The host could be changing setup values by various 3151 commands: Set Control, Create Viewport.
- Perhaps the user changed the setup options in the setup menu, but never performed the "Save" operation (move cursor to "Save" and press space bar).

Cannot Get into Setup

If you cannot get into setup:

- The problem may be a mismatch of keyboards with the video element.
  - If you have a 110 video element with a 310/410/510/610 keyboard, press Ctrl-F4 to enter the setup.
  - if you have a 310/410/510/610 video element with a 110 keyboard, it is impossible to enter the setup.

- It may be that DEC VT200/VT100/VT52 emulation is selected and the keyboard does not have the DEC Keycap kit. Press the F3 key, the location of the setup key when in DEC emulation.

Cannot Print, Not Printing Correctly

If you cannot print or if printing is incorrect:

- Make sure the printer is a serial printer, not a parallel printer.
- Make sure the correct cable is being used with printer. Note the directions of the Receive and Transmit data pins.

3151 Displays Backward Question Marks

Backward question marks are caused by a frame error; the parity, word length, stop bits, and line speed must match the host system.

The (*,/,-,Alt,Ctrl,Page Up,Page Down) Keys Are Not Working

With a model 510/610 in ASCII Mode, the keyboard becomes a 310/410 ASCII layout. This creates the symptom of particular keys not working. Refer to pages 3-1, 3-2 of the 3151 Guide to Operations, Models 510, 610.

Line Drawing Characters Do Not Display

Line drawing characters not displayed is a result of a character mismatch between the host and the 3151. 3151 offers the following character sets: Special Graphics, PC 00437, PC 00850, ISO 8859/1.2. Determine the character set defined in 3151 and determine what the host is expecting.

3151 Has Extra Blank Lines

To get rid of extra blank lines, set "Auto LF = OFF" in the general setup menu, or from the host use "Set Control 3" command: ESC " 9 = b

Application is Not Displaying Correctly

If an application is not displaying correctly, it could be that host commands do not match the 3151 settings. 3151 is set to IBM 3151 and host could be using DEC VT100, WYSE 50/50+. Use 3151 Transparency mode to determine what host is sending.

Cannot Redefine Function Keys

With model 510/610, redefining function keys is not supported.

Constant Beep

A constant beep may occur if you are using a cartridge with model 110. Cartridges are not supported with this model.

Screen is Wavy

If the screen is wavy, change the refresh rate to between 50 and 60 hertz. Press Ctrl-Shift-Hold. 3151 displays keyboard test pattern. Press Ctrl-F10. 3151 displays A or B (refresh rate). Press F1 to toggle between A or B. Power off and on 3151.

3151 Displays "HJ"s in CATIA

CATIA supports VT100 emulation, but the IBM 3151 is set to IBM 3151 mode. The VT100 commands are not compatible with IBM 3151 mode. Therefore, 3151 requires either IBM/DEC or Connectivity cartridge which offers VT52, VT100 or VT200.

3151 Backspace Key is Not Working

If the backspace key does not seem to work:

- When using DEC emulation, the Backspace key is a DEL key, as it is on a DEC terminal.
- It could be that the application is causing the unexpected result.

Setup Values of One 3151 Does Not Match Other 3151

The 3151 offers many models and eight cartridges with over 20 emulations, so the setup value could differ among 3151s. Compare the machine mode of each 3151. Possibilities include:

- Could have two different models 110 versus 310/410 versus 510/610.
- Perhaps one 3151 has a cartridge and the other does not.
- Both 3151s have cartridges, but they may be different types of cartridges: IBM/DEC, Expansion, Connectivity, or WYSE 50/50+.
- Both 3151s have the same cartridge, but the machine mode is not set the same.

Review your 3151 documentation.

32 Common Questions

1. How can I identify the model?
   - Model 110

     ```
     Display          Green
       Part Numbers   81X4500, 09F3483
     Keyboard         84-key ASCII
       Part Number    1392980
     Machine Modes    3151, 10 ASCII Emulations
     ```

   - Model 310

```
Display          Green
  Part Numbers   81X4501 09F3484
Keyboard         102-key ASCII
  Part Number    1392595
Machine Modes    3151, 3101, 10 ASCII Emulations
```

- Model 410

```
Display          Amber-Gold
  Part Number    81X4511 09F3485
Keyboard         102-key ASCII
  Part Number    1392595
Machine Modes    3151, 3101, 10 ASCII Emulations
```

- Model 510

```
Display          Green
  Part Number    38F5101
Keyboard         101-key PS/2
  Part Number    1395162
Machine Modes    3151 PC, 3151 PC II and 925 PC
```

- Model 610

```
Display          Amber-Gold
  Part Number    38F5104
Keyboard         101-key PS/2
  Part Number    1395162
Machine Modes    3151 PC, 3151 PC II and 925 PC
```

2. How can I change the cursor style (block, underscore, blink, none)?

   - Model 110: Press Ctrl-F9.
   - Model 310, 410: No cartridge, press Ctrl-8 (numeric keypad).
   - Model 310, 410: Connectivity Cartridge, user setup menus.
   - Model 310, 410: Expansion Cartridge, user setup menus.
   - Model 310, 410: IBM/DEC cartridge, press Ctrl-8 (numeric keypad).
   - Model 310, 410: WYSE cartridge, press Ctrl-8 (numeric keypad).
   - Model 510, 610: User setup menus or the "Set Cursor Type" command (ESC F pa).

3. How can I change the status line (none, machine status, host message)?

   From the host, change it from Write Host Message, Display Host Message, and Display Machine Status. From the user, change it by keyboard or user setup.

   - Model 110: Press Ctrl-F10.
   - Model 310, 410: No cartridge, press Ctrl-9 (numeric keypad).
   - Model 310, 410: Connectivity Cartridge, user setup menus.
   - Model 310, 410: Expansion Cartridge, user setup menus.
   - Model 310, 410: IBM/DEC cartridge, press Ctrl-8 (numeric keypad).
   - Model 310, 410: WYSE cartridge, press Ctrl-8 (numeric keypad).
   - Model 510, 610: User setup menus.

4. How can I get a RS422 interface on the Main Communications Port?

- Model 110: Not available.
- Model 310, 410: Requires IBM/DEC, Connectivity, Expansion Cartridge.
- Model 510, 610: RS422 is included.

5. Does the auxiliary port support RS422 interface?

   No, it only supports RS232.

6. What is the difference between RS232 and RS422?

   - RS232 defines nine pins. Two pins are used for Transmit and Receive Data (TD, RD). RS422 defines five pins. Four pins are used for Transmit and Receive date (TD+, TD-, RD+, RD-).
   - RS232C can attach 50-75 feet; RS232D can attach 200 feet; RS422 can attach 4000 feet.

7. How can I change the function keys?

   - Models 110, 310, 410: From the host or by user setup (DEF F).
   - Models 510, 610: Not available.

8. How many function keys are available on the 3151?

   - Model 110
     - 12 physical, 12 total (unshifted only)
     - Redefinable from host or user setup (DEF F).
   - Model 310/410
     - 12 physical, shiftable to 36 (unshifted, shift, ctrl-shift)
     - Redefinable from host or user setup (DEF F).
   - Model 510/610
     - 12 physical, shiftable to 36 (unshifted, shift, ctrl-shift)
     - Not redefinable

9. How can I reset/clear a function key to the default value?

   - From User setup — Press Ctrl-Clear key.
   - From Host — (ESC SP t) "Reset All Default Default Function Keys"

10. Can an input device be attached to the auxiliary port?

    - Model 110: No, auxiliary port is unidirectional.
    - Model 310, 410, 510, 610: Yes, auxiliary port is bidirectional.

11. Can a key (setup, break, ctrl, etc.) be disabled?

    No, except with a keystopper under the keycap.

12. Can a key swap locations with another key?

    No.

13. Can I add a model 310, 410, 510, or 610 keyboard to a model 110 display?

    Cannot mix any combination of 84-, 101-, and 102-key keyboards. Keyboard must match video display.

14. How can I automatically dial a modem?

With a connectivity cartridge or by assigning an unused function key. The cartridge requires six keystrokes; the unused function key requires two to three.

15. How can I activate or deactivate a printer from the keyboard?

    Press Ctrl-Trace key.

16. How can I display CAPS information?

    Turn on the status line.

17. How can I get 132 columns?

    - Model 110 supports 24X80 or 25X80.
    - Model 310, 410 supports 24X80, 25X80, 24X132, or 25X132.
    - Model 310, 410 Expansion Cartridge supports models 310, 410 base screen sizes, plus 28X80 or 28X132.
    - Model 510, 610 supports 24X80, 25X80, 24X132, or 25X132.

18. How can I change the screen size?

    From setup, or from the host using the "Create Viewport Command".

    ```
    24 X 80        ESC SP r ! ! SP 8 " P
    25 X 80        ESC SP r ! ! SP 9 " P
    28 X 80        ESC SP r ! ! SP < " P (Expansion Cartridge)
    24 X 132       ESC SP r ! ! SP 8 $ D
    25 X 132       ESC SP r ! ! SP 9 $ D
    28 X 132       ESC SP r ! ! SP < $ D (Expansion Cartridge)
    ```

19. Are communication cables included?

    No.

20. What is the command to turn printer on/off from the host?

    Begin/End Pass-Through Mode (DLE DC2 and DLE DC4).

21. Can 3151 be switched between 110 and 220 volts?

    No, each country has appropriate video display with proper power supply.

22. How can the 3151 display line drawing characters?

    Step A: Assign G0/G1 using "Select Character Set" command.

    Step B: Select either G0 or G1 by:

    - 8 bit mode: Turn on most significant bit.
    - 7 bit mode: Use SO/SI ASCII control characters.

23. What character sets are available?

    - Model 110/310/410 - US ASCII and IBM Special Graphics
    - Model 510/610 - US ASCII, IBM Special Graphics, PC Code Page 00437, PC Code Page 00850.

24. What is the sex of the main and auxiliary ports?

    Both are 25-pin D-Shell female.

25. Which port is the main communication port?

    If you look at the back of the 3151, the main port is on the right-hand side, closest to the edge. The auxiliary port is closest to the power cord.

26. How can I get dual session?

    With a Cartridge for Connectivity, by selecting "Dual Session by Dual Port" in "SESSION ASSIGNMENT" setup menu.

27. Are there any keyboard extension cables available?

    IBM does not offer or support any changes between the keyboard and display elements.

28. Is there any support of the 7695 Bar Code Reader that is placed between keyboard and display elements?

    Only the model 510/610 supports the 7696 Bar Code Reader. OEM products are available that can be placed between the keyboard and display element; however, IBM does not support these OEM devices.

29. Does the 3151 offer a CRT Saver/Screen Saver?

    Yes, CRT is selectable between "No Save" or 15 minutes. The CRT is selectable by the user in the General Setup menu, or by the host with the "Set Control 2" command.

30. What is the difference between 8J0140 (3151-805) and 8J0141 (AS/400 Cartridge)?

    When 8J0141 (Cartridge/Keycap Kit) is installed on a 3151 Model 310, the 3151 is the same a 3151-805. The 3151-805 is available only in green. 8J0141 can be also installed on 3151 Model 410 (amber-gold). 8J0140 is for new installations, and 8J0141 is for existing 3151-31/41 installed.

31. Is a tilt/swivel stand included?

    Yes, effective 05/89.

32. Does 3151 have a data entry keyboard?

    No.

Sample Settings for 3151

GENERAL

```
Machine Mode      IBM 3151       Forcing Insert   Both
Screen            Normal       Tab              Field
Row and Column    24 X 80
Scroll            Jump
Auto LF           Off
CRT Saver         Off      Term. ID _____________
Line Wrap         On
Message Type   STATUS LINE
```

COMMUNICATIONS

Operating Mode	Echo		
Line Speed (bps)	9600	Line Control	IPRTS
Word Length (bits)	8	Break Signal (ms)	500
Parity	No	Send Null Suppress	On
Stop Bit	1		
Turnaround Character	CR		

KEYBOARD

Enter	Send
Return	New Line
New Line	CR
Send	Line
Insert Character	Space

Reader's Comments

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