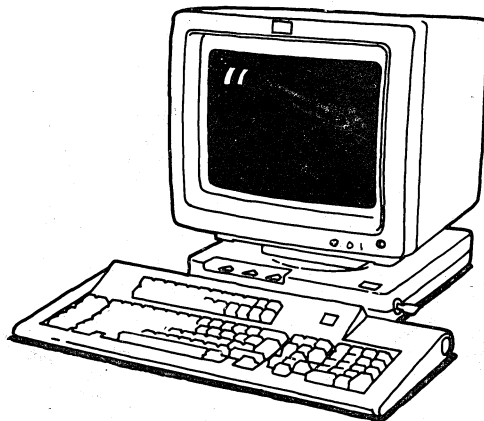


**IBM 3179 Color Display Station
Operator Reference and
Problem Solving Guide**

**GA18-2180-1
File No. 3270/4300-09**



Second Edition (September, 1984)

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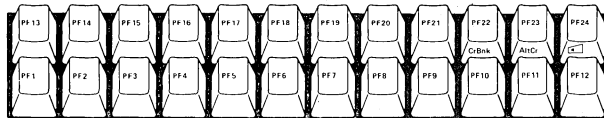
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HOW TO USE THIS GUIDE

Keys	Messages	Problem Solving -Symptoms	Problem Solving -Checkout	Exchange & Packing
<p>This section gives you a summary of the keys and their functions.</p> <p>Page 1.</p>	<p>This section gives you a summary of the messages that appear below the blue line.</p> <p>Page 7.</p>	<p>This section helps you to identify a failing element from your symptom.</p> <p>Page 15.</p>	<p>This section should be used when you cannot identify a failing element from your symptom.</p> <p>Page 49.</p>	<p>This section tells you how to replace a failing element with a good one and how to pack it for return to IBM for repair or replacement.</p> <p>Page 61 and 73.</p>

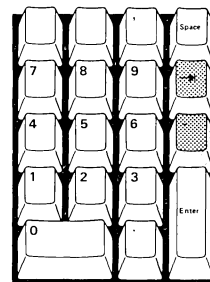
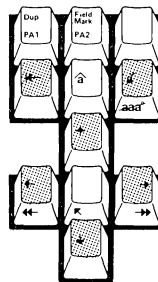
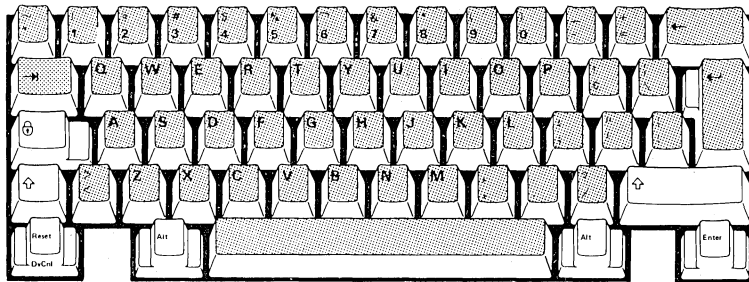
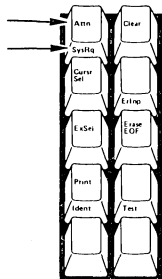
Keys

The following section shows the standard keyboard layout and the function of each key.










 Repeat-action keys
(repeat characters or
functions when held
down)

Top
Front



Standard 122-Key Typewriter Keyboard (U.S. English)

Marking on Key	Name of Key	Function
Alt	Alternate Shift	Activates function on front face of keys. Not all keys have an alternate function.
AltCr	Alternate Cursor	Selects between two forms of the cursor.
Attn	Attention	Requests attention of the system (only if <u>B</u> is displayed in position 2 below the blue line).
Clear	Clear	Erases screen and signals system that clear action occurred.
CrBnk	Cursor Blink	Causes a nonblinking cursor to blink, and a blinking cursor to stop blinking.
Cursr Sel	Cursor Select	Selects fields for processing. Cursor must be in a field that your application has designated for cursor selection.
Dup	Duplicate	Causes prior entry for this field to be duplicated. Displays $\bar{*}$ or * and moves cursor forward to first position of next input field.
DvCnl	Device Cancel	Cancels a pending request by the Print key to a printer that is busy and restores the keyboard. If the printer is not working, it restores the keyboard and resets  , if displayed.

Marking on Key	Name of Key	Function
PA1–2	Program Access Keys 1–2	Function determined by application.
PF1–24	Program Function Keys 1–24	Function determined by application.
Print	Print	Sends data from this display station to the assigned printer.
	Clicker (Beeper)	Turns keyboard clicker on or off. Note: This sound is actually a beep.
	Shift Lock	Locks keyboard in upshift.
	Shift	Upshift. Also unlocks the Shift Lock.
	Tab	Moves cursor forward to first position of next input field.
	Backspace	Moves cursor backward.
ExSel	Extended Select	Lets you use the extended select functions.
	Word Delete	Deletes a word at cursor position.

Enter	Enter	Requests that data from your IBM 3179 be sent to the system.
Erase EOF	Erase to End-of-Field	Erases input field from cursor to end of field. Cursor does not move.
ErInp	Erase Input	Erases all input fields and moves cursor to first input character position on your screen.
Field Mark	Field Mark	Marks end of input field on unformatted screen by displaying either $\bar{\quad}$ or ; .
Ident	Printer ID	Signals that the next two numbers entered will become the IDENT number of the printer assigned to your IBM 3179. But if ?? is displayed, it only replaces ?? with the current assignment.
Reset	Reset	Resets x conditions as noted in the next section on "Messages." Resets a condition and a printer IDENT operation. Cancels dead key operation, leaving stand-alone accent at cursor.
SysRq	System Request	With <u>A</u> in position 2 below the blue line, signals the system that you have a test request message on your IBM 3179. Ask your supervisor for details. With <u>B</u> in position 2 below the blue line, switches your IBM 3179 between application and control programs. Ask your supervisor for details.
Test	Test	Clears your screen. Ask your supervisor for details. Used to start and end special problem determination functions.

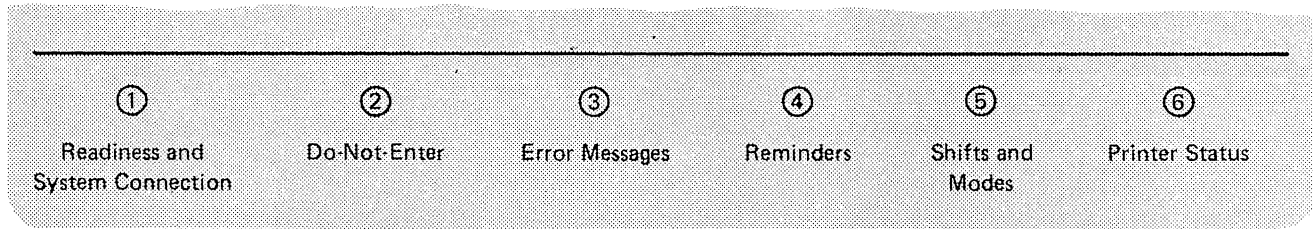
Marking on Key	Name of Key	Function
←	Back Tab	Moves cursor backward to first position of input field. If cursor is in first position of field, moves cursor to first position of preceding input field.
↖	Cursor Home	Moves cursor to first position in first input field of screen.
↵	New Line	Moves cursor to first position of first input field in the next line.
⏎	Insert	Lets you insert characters between others you have already typed. To stop inserting, press the Reset key.
✂	Delete Character	Deletes character at cursor position in input field.
↑	Cursor Up	Moves cursor up.
↓	Cursor Down	Moves cursor down.
←	Cursor Left	Moves cursor to the left.
→	Cursor Right	Moves cursor to the right.
⇐	Double-Speed Cursor Left	Moves cursor to the left at double speed.
⇒	Double-Speed Cursor Right	Moves cursor to the right at double speed.

Intentionally left blank.

Operator Messages

Operating and status messages appear in the operator information area, which is the bottom line on the screen and is separated from the rest of the display by a blue line.

The messages are grouped into six categories and are displayed in different areas, as follows:



There are some differences between the operator messages for the IBM 3179 attached to the IBM 3274 and IBM 3276, and those for the IBM 3179 attached to the IBM 4321, IBM 4331, and IBM 4361. The following messages are typical operator messages in both cases.

Messages from the IBM 3274 and IBM 3276. (See page 12 for IBM 4300 messages.)

● Readiness and System Connection Symbols (Group ①)

- Position 1 4 or 6 – Means the IBM 3274 (4) or IBM 3276 (6) control unit is working (ready).
- Position 2 A or B – Means the control unit is connected (online) to the host system under rule A (A) or rule B (B).
- Position 3 – Your display station is working with your job (application program).
- Position 3 P – Your display station is connected to the system operator (control program).
- Position 3 ? – Your display station is connected to the host system but is not connected to your application program or to the control program.
- Position 3-6 TEST – Your display station is in test mode.

● Do-Not-Enter (Input-Inhibited) Messages (Group ②)

- X ? – Time is required for the host system to perform a function. Wait.

X ?+

– What? Input not understood. Check screen. Press the Reset key and try the operation again.

X SYSTEM

– The host system has locked your keyboard. Look for a message. Wait or press the Reset key.

X ← →

– Go elsewhere on the screen to take that action. Press the Reset key. Move the cursor or take another action.

X →

– You have tried to insert more data than this field can hold. Press the Reset key. Correct the entry.

X -S

– The symbol keyed is not available. The Reset key should be pressed to restore the keyboard.

X NUM

– Numeric Data Only. You should enter only numerals in this field. Press the Reset key and enter a numeral.

X #?

– Only certain numerals can be entered here. Press the Reset key.

X

– Security key is turned to Off. Keyboard can be unlocked only by the key. Go to page 18.

X -f

– The function you requested is not available. Press the Reset key.

X NN

– Your display station is not operating properly. Press the Reset key and re-try. If the problem persists,

or

X NNN

notify your supervisor of this message, including the numbers, for further action. (N is a digit, 0 through 9.)

X NN

– There is a problem with the communication line between the control unit and the host system.

or

X NNN

Press the Reset key and re-try. If the problem persists, notify your supervisor of this message, including the numbers, for further action. (N is a digit, 0 through 9.)

X 2%%


– Either a setup error or a keyboard failure. Go to page 19.


X 73



– Either a setup error or a keyboard failure. Go to page 19.

XPROG NN
or
XPROG NNN

- The control unit detected a programming error in the data it received from the host system. Press the Reset key and re-try. If the problem persists, notify your supervisor of this message, including the numbers, for further action. (N is a digit, 0 through 9.)


X□□

- The printer connected to your display station is busy. If □ is displayed on the right, the printer is busy printing your job. Wait for the operation to finish, or press the DvCnl key to cancel a pending print operation. (If the print operation has started, the operation cannot be canceled by the DvCnl key.)

X□□

- Same as preceding, except more time is anticipated before your operation is accepted.

X□

- The printer assigned to your display station is not working. If □ is displayed on the right, the printer stopped while printing your job. Wait or press the DvCnl key to cancel the print operation.

X†**X**

- You are not authorized to do that function. Press the Reset key.

X□←

- A message from the control operator was received and rejected. Press the Reset key.

● Error Messages (Group ③)

X1

- There is a problem in your logic element. Go to page 69.

X2

- There is a problem in either your keyboard or logic element. Go to page 17.

X3

- Your keyboard cable is not properly attached or there is a problem in your keyboard. Go to page 18.

- Reminders (Group ④)

NN

– The communication link connecting your control unit to the host system is producing errors.

or

NNN

Notify your supervisor of this message, including the numbers, for further action. (N is a digit, 0 through 9.)

– Reserved for future use. Ignore.

- Shifts and Modes Messages (Group ⑤)

– The keyboard is in upshift.

– The IBM 3179 is in insert mode.

NUM

– The keyboard is in numeric shift.

- Printer Status Messages (Group ⑥)

– When you are changing the Printer ID/Class, the two numerals you enter are displayed in the underlined portions of the message.

NN

– Your IBM 3179 is authorized to use Printer ID/Class NN. (N is a digit, 0 through 9.)

NN

– The selected printer is printing your job. (N is a digit, 0 through 9.)

NN

– The printer stopped while printing your job. (N is a digit, 0 through 9.)

??








– Your printer assignment has changed.

Messages from the IBM 4321, IBM 4331, and IBM 4361. (See page 8 for IBM 3274/3276 messages)

● Readiness and System Connection Symbols (Group ①)

- Position 1 I — Means the IBM 4321, IBM 4331, or IBM 4361 Processor (I) is working (ready).
 Position 2 A — Means the Display/Printer Adapter is connected to the system under rule A (A).
 Position 3-6 TEST — Your display station is in test mode.

● Do-Not-Enter (Input-Inhibited) Messages (Group ②)

- X  — Time is required for the system to perform a function. Wait.
 X ?+ — What? Input not understood. Check screen. Press the Reset key and try the operation again.
 X   — Go elsewhere on the screen to take that action. Press the Reset key.
 Move the cursor or take another action.
 X  > — You have tried to insert more data than this field can hold. Press the Reset key. Correct the entry.
 X C-f — The function you requested is not available. Press the Reset key.
 X  — Security key is turned to Off. Keyboard can be unlocked only by the key. Go to page 18.
 X - S — The symbol keyed is not available. The Reset key should be pressed to restore the keyboard.
 X  NUM — Numeric data only. You should enter only numerals in this field. Press the Reset key and enter a numeral.
 X  229 — Enter machine type "3278" instead of "3179" into configuration picture at customization.

- Error Messages (Group ③)

- ~~1~~ – There is a problem in your logic element. Go to page 69.
- ~~2~~ – There is a problem in either your keyboard or logic element. Go to page 17.
- ~~3~~ – Your keyboard cable is not properly attached or there is a problem in your keyboard. Go to page 18.

- Shifts and Modes Messages (Group ⑤)

- ↑ – The keyboard is in upshift.
- ^ – The IBM 3179 is in insert mode.
- NUM – The keyboard is in numeric shift.

● Printer Status Messages (Group ⑥)

□□__

— When you are changing the Printer ID/Class, the two numerals you enter are displayed in the underlined portions of the message.

□□NN

— Your IBM 3179 is authorized to use Printer ID/Class nn. (N is a digit, 0 through 9.)

□■

— The printer is printing your job.

✕□□⊙

— The printer connected to your display station is busy. Wait for the operation to finish, or press the DvCnl key to cancel a pending print operation. (Once the print operation has started, the operation cannot be canceled by the DvCnl key.)

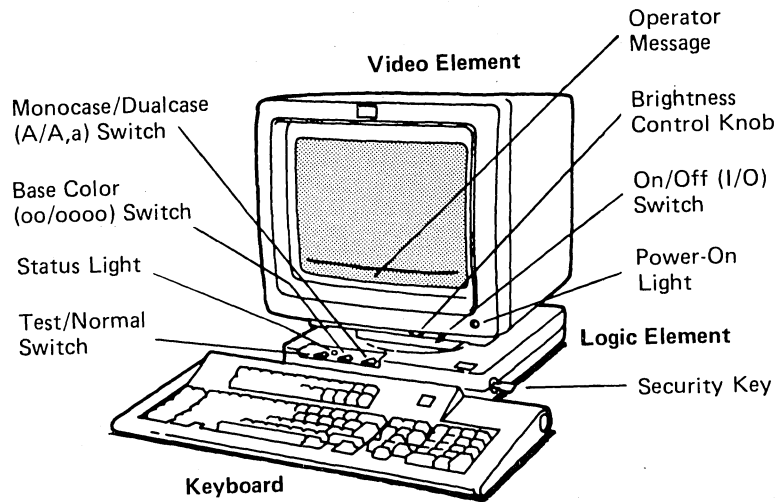
✕□□

— The printer assigned to your display station is not working. Wait or press the DvCnl key to cancel the print operation.


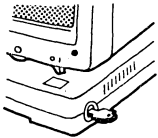
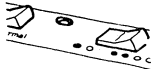
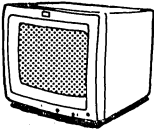
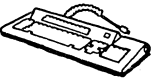
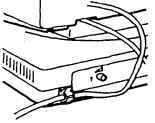
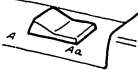



Problem Solving-Symptoms

This section helps you find a problem or locate a bad element. Go to the symptom index on page 16, find a probable error, then go to the page specified. Find a symptom that matches yours and perform the action specified.

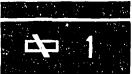



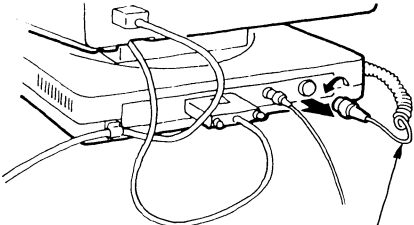
If you still cannot find your problem, go to 'Problem Solving-Checkout' on page 49.

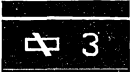

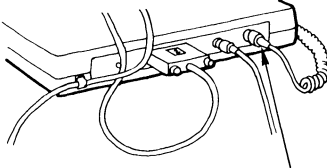


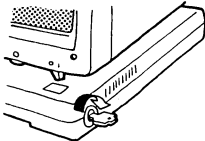


Symptom Index

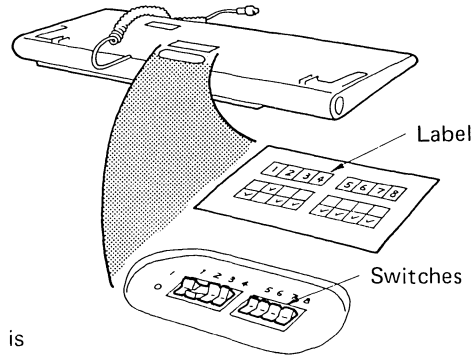
<p>Operator Messages</p>  <p>Page 17</p>	<p>Power-On Light or Status Light Problems</p>   <p>Page 21</p>	<p>Display Problems</p>  <p>Page 25</p>	<p>Keyboard Problems</p>  <p>Page 39</p>	<p>Audible Alarm Problems</p>  <p>Page 43</p>	<p>Monocase/ Dualcase (A/A,a) Switch Problems</p>  <p>Page 45</p>	<p>Base Color (oo/oooo) Switch Problems</p>  <p>Page 46</p>	<p>Stand or Power Cord Problems</p>  <p>Page 47</p>  <p>Page 48</p>
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Operator Messages




Symptom	Action
 <p>(Logic element error)</p>	Replace the logic element. Go to page 69.
 <p>(Keyboard or logic element error)</p>	<ol style="list-style-type: none">1. Set the I/O switch to O (Off).2. Remove the keyboard cable.3. Set the I/O switch to I (On).4. Did the  2 change to  3 ? YES: Replace the keyboard . Go to page 65. NO: Replace the logic element. Go to page 69.  <p>Keyboard Cable</p>

Symptom	Action	
 <p data-bbox="250 360 497 394">(Keyboard error)</p>	<ol data-bbox="653 192 1303 381" style="list-style-type: none"> 1. Set the I/O switch to O (Off). 2. Make sure the keyboard cable is firmly connected to the logic element. 3. Set the I/O switch to I (On). 4. Is  still displayed? <p data-bbox="722 391 1396 422">YES: Replace the keyboard. Go to page 65.</p> <p data-bbox="722 433 1234 464">NO: Return to normal operation.</p>	 <p data-bbox="1854 422 2086 453">Keyboard Cable</p>
 <p data-bbox="269 733 478 764">(Security key)</p>	<ol data-bbox="653 519 1419 705" style="list-style-type: none"> 1. Turn the security key off (counter-clockwise). 2. Turn the security key on (clockwise). 3. Is  still displayed? <p data-bbox="722 757 1466 788">YES: Replace the logic element. Go to page 69.</p> <p data-bbox="722 798 1234 829">NO: Return to normal operation.</p>	

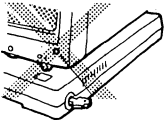

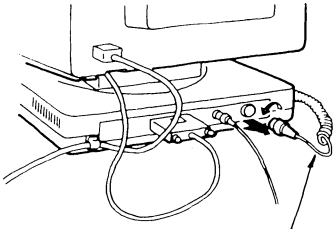
Symptom	Action
<div data-bbox="281 277 471 381" data-label="Image"> </div> <p data-bbox="246 451 501 484">(Incorrect setup)</p> <p data-bbox="357 576 390 598">or</p> <div data-bbox="281 664 471 767" data-label="Image"> </div> <p data-bbox="246 826 501 859">(Incorrect setup)</p>	<ol data-bbox="657 236 1380 466" style="list-style-type: none"> 1. Set the I/O switch to O (Off). 2. Make sure the setup switches underneath the keyboard are set as shown on the label. 3. Do the switches and the label match? <p data-bbox="722 515 1303 588"> YES: Go to step 4. NO: Correct the setup switch setting. </p> <ol data-bbox="657 636 1454 909" style="list-style-type: none"> 4. Set the I/O switch to I (On). 5. If the symptom remains or recurs, the problem is a setup error or a keyboard failure. Request assistance from your supervisor. If it is a setup error, he should help you solve your problem. If it is a keyboard failure, go to page 65.



Sample Switch Setting

Symptom	Action
No ready symbol	<p>1. Check that the communication cable is connected to the logic element.</p> <p>2. Does the ready symbol appear?  or  or </p> <p>YES: Return to normal operation. NO: Go to "Problem Solving-Checkout" on page 49.</p>
Some other operator message	See "Operator Messages" on page 7.
If you have none of the above symptoms, go back to "Problem Solving-Symptoms" on page 15.	

Power-On Light or Status Light Problems

Symptom	Action
<p data-bbox="118 381 490 412">Power-on light is not on</p> 	<ol style="list-style-type: none"><li data-bbox="641 381 1157 412">1. Set the I/O switch to O (Off).<li data-bbox="641 422 1466 490">2. Make sure the power cord is firmly connected and power is available at the power outlet.<li data-bbox="641 500 1141 531">3. Set the I/O switch to I (On).<li data-bbox="641 541 1241 572">4. Does the Power-On light come on? YES: Return to normal operation. NO: Go to step 5.<li data-bbox="641 660 1157 692">5. Set the I/O switch to O (Off).<li data-bbox="641 702 1117 733">6. Unplug the keyboard cable.<li data-bbox="641 743 1222 774">7. Set the I/O switch back to I (On).<li data-bbox="641 785 1241 816">8. Does the Power-On light come on? YES: Replace the keyboard. Go to page 65. NO: Go to step 9. <p data-bbox="629 878 1134 945"> Continued on the next page.</p>  <p data-bbox="1861 816 2098 847">Keyboard Cable</p>

9. Set the I/O switch to O (Off).

10. Unplug the video cable.

11. Set the I/O switch to I (On).

12. Does the Power-On light come on?

YES: Replace the logic element. Go to page 69.

NO: The problem is in either the video element or the power cord. Go to step 13.

13. Do you have another IBM 3179?

YES: Replace the power cord with that of another IBM 3179.

Does the Power-On light come on?

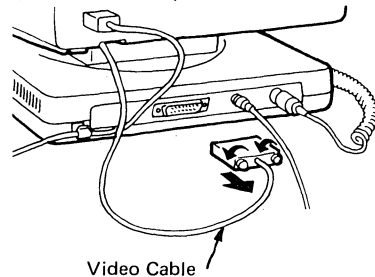
YES: Replace the power cord. Go to page 48.

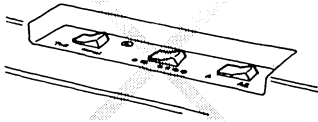
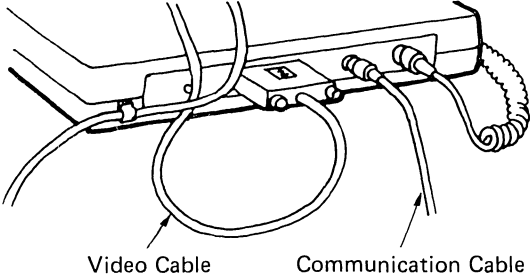
NO: Replace the video element. Go to page 61.

NO: Is the power cord physically damaged?

YES: Replace the power cord. Go to page 48.

NO: Replace the video element. Go to page 61.



Symptom	Action
<p data-bbox="111 236 567 308">Power-On light is on, but the Status light is off</p> 	<ol data-bbox="636 236 1412 868" style="list-style-type: none"> 1. Is either the 1 , 2 , or 3 displayed? YES: Go to "Operator Messages" on page 17. NO: Go to step 2. 2. Set the I/O switch to O (Off). 3. Make sure the video cable is firmly connected to the logic element. 4. Set the I/O switch to I (On). 5. Set the Test/Normal switch to Test. <p data-bbox="636 888 1134 924">↓ Continued on the next page.</p> 

6. Is the Status light continuously blinking?

YES: Go to step 7.

NO: Replace the logic element. Go to page 69.

7. Is the communication cable from the control unit or the host computer firmly connected to the logic element?

YES: The problem is not in your IBM 3179.

Request assistance from your supervisor.

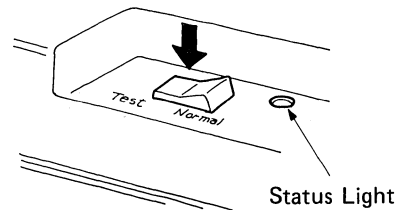
NO: Set the I/O switch to O (Off).

Connect the communication cable firmly to the logic element.

Set the I/O switch to I (On). Return to normal operation.

CAUTION

Do not connect the communication cable during an electrical storm.



If you have none of the above symptoms, go back to "Problem Solving-Symptoms" on page 15.


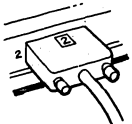
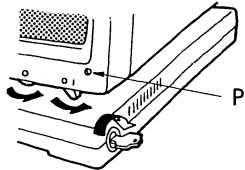
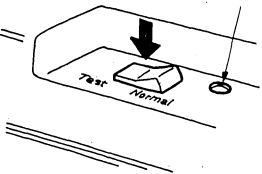
Display Problems

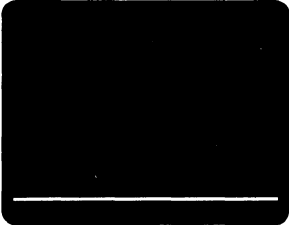
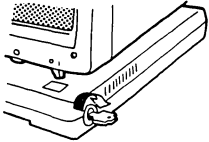
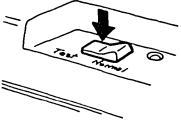
Symptom	Action
<p>A bright horizontal or vertical line appears in the center or Characters at the top are either larger or smaller than those at the bottom</p> <div data-bbox="153 617 576 940" style="border: 1px solid black; padding: 5px;"><p>ABCDEFGHIJKLMN OPQRSTUVWXYZ123 ABCDEFGHIJKLMN OPQRSTUVWXYZ123 ABCDEFGHIJKLMN OPQRSTUVWXYZ123 ABCDEFGHIJKLMN OPQRSTUVWXYZ123 ABCDEFGHIJKLMN OPQRSTUVWXYZ123 ABCDEFGHIJKLMN OPQRSTUVWXYZ123 ABCDEFGHIJKLMN OPQRSTUVWXYZ123 ABCDEFGHIJKLMN OPQRSTUVWXYZ123 ABCDEFGHIJKLMN OPQRSTUVWXYZ123 ABCDEFGHIJKLMN OPQRSTUVWXYZ123 ABCDEFGHIJKLMN OPQRSTUVWXYZ123 ABCDEFGHIJKLMN OPQRSTUVWXYZ123 ABCDEFGHIJKLMN OPQRSTUVWXYZ123 ABCDEFGHIJKLMN OPQRSTUVWXYZ123 ABCDEFGHIJKLMN OPQRSTUVWXYZ123 ABCDEFGHIJKLMN OPQRSTUVWXYZ123 ABCDEFGHIJKLMN OPQRSTUVWXYZ123 ABCDEFGHIJKLMN OPQRSTUVWXYZ123 ABCDEFGHIJKLMN OPQRSTUVWXYZ123 ABCDEFGHIJKLMN OPQRSTUVWXYZ123</p></div>	<p>Replace the video element. Go to page 61.</p>

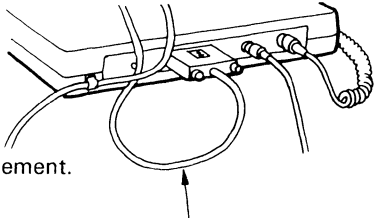
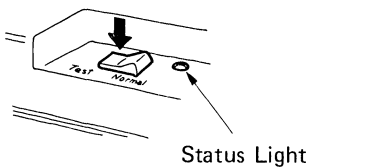
Symptom	Action
<p data-bbox="134 197 474 228">Screen is out of focus</p> <p data-bbox="357 322 397 350">or</p> <p data-bbox="134 436 585 467">Screen is smaller than normal</p> <div data-bbox="165 531 590 860" style="border: 1px solid black; padding: 10px; margin: 10px 0;"><p data-bbox="257 598 483 778">ABCDEFGHIJKLMN OPQRSTU VWXY Z123 ABCDEFGHIJKLMN OPQRSTU VWXY Z123 ABCDEFGHIJKLMN OPQRSTU VWXY Z123 ABCDEFGHIJKLMN OPQRSTU VWXY Z123 ABCDEFGHIJKLMN OPQRSTU VWXY Z123 ABCDEFGHIJKLMN OPQRSTU VWXY Z123 ABCDEFGHIJKLMN OPQRSTU VWXY Z123 ABCDEFGHIJKLMN OPQRSTU VWXY Z123 ABCDEFGHIJKLMN OPQRSTU VWXY Z123 ABCDEFGHIJKLMN OPQRSTU VWXY Z123 ABCDEFGHIJKLMN OPQRSTU VWXY Z123 ABCDEFGHIJKLMN OPQRSTU VWXY Z123 ABCDEFGHIJKLMN OPQRSTU VWXY Z123 ABCDEFGHIJKLMN OPQRSTU VWXY Z123 ABCDEFGHIJKLMN OPQRSTU VWXY Z123 ABCDEFGHIJKLMN OPQRSTU VWXY Z123 ABCDEFGHIJKLMN OPQRSTU VWXY Z123 ABCDEFGHIJKLMN OPQRSTU VWXY Z123 ABCDEFGHIJKLMN OPQRSTU VWXY Z123 ABCDEFGHIJKLMN OPQRSTU VWXY Z123</p></div>	<p data-bbox="660 197 1315 228">Replace the video element. Go to page 61.</p>

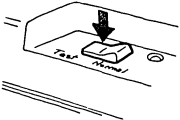
Symptom	Action
<p data-bbox="111 233 587 305">Screen is the normal width but its height is expanded</p> <div data-bbox="139 409 560 733" style="border: 1px solid black; border-radius: 10px; padding: 5px;"><p data-bbox="181 414 518 426">ABCDEFGHIJKLMNOPQRSTUVWXYZ123</p><p data-bbox="181 433 518 445">ABCDEFGHIJKLMNOPQRSTUVWXYZ123</p><p data-bbox="181 451 518 464">ABCDEFGHIJKLMNOPQRSTUVWXYZ123</p><p data-bbox="181 470 518 482">ABCDEFGHIJKLMNOPQRSTUVWXYZ123</p><p data-bbox="181 488 518 501">ABCDEFGHIJKLMNOPQRSTUVWXYZ123</p><p data-bbox="181 507 518 520">ABCDEFGHIJKLMNOPQRSTUVWXYZ123</p><p data-bbox="181 526 518 538">ABCDEFGHIJKLMNOPQRSTUVWXYZ123</p><p data-bbox="181 544 518 557">ABCDEFGHIJKLMNOPQRSTUVWXYZ123</p><p data-bbox="181 563 518 576">ABCDEFGHIJKLMNOPQRSTUVWXYZ123</p><p data-bbox="181 582 518 594">ABCDEFGHIJKLMNOPQRSTUVWXYZ123</p><p data-bbox="181 600 518 613">ABCDEFGHIJKLMNOPQRSTUVWXYZ123</p><p data-bbox="181 619 518 631">ABCDEFGHIJKLMNOPQRSTUVWXYZ123</p><p data-bbox="181 638 518 650">ABCDEFGHIJKLMNOPQRSTUVWXYZ123</p><p data-bbox="181 656 518 669">ABCDEFGHIJKLMNOPQRSTUVWXYZ123</p><p data-bbox="181 675 518 687">ABCDEFGHIJKLMNOPQRSTUVWXYZ123</p><p data-bbox="181 694 518 706">ABCDEFGHIJKLMNOPQRSTUVWXYZ123</p><p data-bbox="181 712 518 725">ABCDEFGHIJKLMNOPQRSTUVWXYZ123</p></div>	<p data-bbox="634 233 1285 264">Replace the video element. Go to page 61.</p>

Symptom	Action
<p data-bbox="111 249 543 319">Characters on the screen are magnified</p> <div data-bbox="134 422 560 746" style="border: 1px solid black; padding: 5px;"><p data-bbox="134 428 560 740">BCDEFGHIJKLMNOPQRSTUVWXYZ12 BCDEFGHIJKLMNOPQRSTUVWXYZ12 BCDEFGHIJKLMNOPQRSTUVWXYZ12 BCDEFGHIJKLMNOPQRSTUVWXYZ12 BCDEFGHIJKLMNOPQRSTUVWXYZ12 BCDEFGHIJKLMNOPQRSTUVWXYZ12 BCDEFGHIJKLMNOPQRSTUVWXYZ12 BCDEFGHIJKLMNOPQRSTUVWXYZ12 BCDEFGHIJKLMNOPQRSTUVWXYZ12 BCDEFGHIJKLMNOPQRSTUVWXYZ12 BCDEFGHIJKLMNOPQRSTUVWXYZ12 BCDEFGHIJKLMNOPQRSTUVWXYZ12 BCDEFGHIJKLMNOPQRSTUVWXYZ12 BCDEFGHIJKLMNOPQRSTUVWXYZ12</p></div>	<p data-bbox="634 249 1292 280">Replace the video element. Go to page 61.</p>

Symptom	Action
<p>Screen appears to be rolling up or down, to the left or right or Screen has no pictures and adjusting the brightness has no effect</p> 	<ol style="list-style-type: none"> 1. Set the I/O switch to O (Off). 2. Make sure the video cable is firmly connected to the logic element. 3. Set the I/O switch to I (On). 4. Turn the security key and the Brightness Control knob fully clockwise. 5. Make sure the power-on light is on. 6. Set the Test/Normal switch to Test. 7. Does the symptom disappear? YES: Return to normal operation. NO: Go to step 8. 8. Is the Status light continuously blinking? YES: Replace the video element. Go to page 61. NO: Replace the logic element. Go to page 69.  <p style="text-align: right;">Video Cable</p>  <p style="text-align: right;">Power-On Light</p>  <p style="text-align: right;">Status Light</p>

Symptom	Action
<p data-bbox="111 249 594 322">Screen has no characters displayed above the divider line</p> 	<ol style="list-style-type: none"> <li data-bbox="634 249 1419 322">1. Is either the 1 , 2 , or 3 displayed? YES: Go to "Operator Messages" on page 17. NO: Go to step 2. <li data-bbox="634 368 1459 401">2. Turn the security key off and then on (clockwise). <li data-bbox="634 490 1241 523">3. Set the Test/Normal switch to Test. <li data-bbox="634 529 1419 601">4. Are characters displayed above the divider line? YES: Go to step 5. NO: Replace the logic element. Go to page 69. <li data-bbox="634 648 1287 681">5. Set the Test/Normal switch to Normal. <li data-bbox="634 769 1768 842">6. If the symptom remains or recurs, the problem is not in the IBM 3179. Request assistance from your supervisor.  


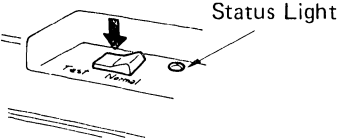
Symptom	Action
<p>Red, green, or blue does not show up on your screen</p> <p>or</p> <p>A color is substituted by another color</p>	<ol style="list-style-type: none"> 1. Change the setting of the Base Color (oo/oooo) switch. 2. Does the missing color appear? YES: Return to normal operation. NO: Go to step 3. 3. Set the I/O switch to O (Off). 4. Make sure the video cable is firmly connected to the logic element. 5. Set the I/O switch to I (On). 6. Turn the security key on (clockwise). 7. Set the Test/Normal switch to Test. 8. Is the Status light continuously blinking? YES: Go to step 9. NO: Replace the logic element. Go to page 69. 9. Does the red, green, and blue appear on your test pattern. YES: The problem is not in your IBM 3179. Set the Test/Normal switch to Normal. Request assistance from your supervisor. NO: Replace the video element. Go to page 61. <div style="text-align: right;">  <p>Video Cable</p>  <p>Status Light</p> </div>

Symptom	Action
<p>Problems with highlighted characters (reversed, blinking, or underscore)</p>	<ol style="list-style-type: none"> 1. Set the Test/Normal switch to Test. 2. Are there highlighted characters in the test pattern? <p>YES: The problem is not in your IBM 3179. Request assistance from your supervisor. Set the Test/Normal switch back to Normal.</p> <p>NO: Replace the logic element. Go to page 69.</p> 

Symptom	Action
Part of your screen becomes reddish, greenish, or bluish	<ol style="list-style-type: none">1. Set the I/O switch to 0 (Off).2. Wait 15 minutes.3. Set the I/O switch to 1 (On).4. Do you still have the same problem? YES: Repeat steps 1, 2, and 3. Then go to step 5. NO: Return to normal operation.5. Do you still have a problem? YES: Replace the video element. Go to page 61. NO: Return to normal operation.

Symptom	Action
Some other display problem	<ol style="list-style-type: none"><li data-bbox="646 168 1373 205">1. Replace the video element. Go to page 61.<li data-bbox="646 368 1268 405">2. Do you still have the same problem? YES: Replace the logic element. Go to page 69. NO: Return to normal operation.
If you have none of the above symptoms, go back to "Problem Solving-Symptoms" on page 15.	

Keyboard Problems

Symptom	Action
<p data-bbox="118 401 476 467">You cannot type in any character</p> 	<ol data-bbox="641 401 1591 788" style="list-style-type: none">1. Make sure the Security key is turned fully clockwise to on.2. Set the Test/Normal switch to Test.3. Is the Status light continuously blinking? YES: Go to step 4. NO: Replace the logic element. Go to page 69.4. Is either a 1, 2, or 3 displayed? YES: Go to "Operator Messages" on page 17. NO: Go to step 5.5. Type in any character.6. Does any character appear? (The character on your screen does not have to match the key cap label.) YES: The problem is not in your IBM 3179. Request assistance from your supervisor. NO: Replace the keyboard. Go to page 65. 

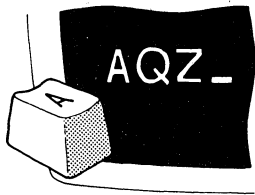
Symptom**Action**

You cannot type in some characters

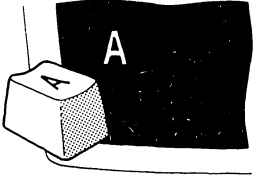


or

Characters appear more than once when you type in a key

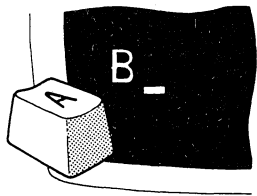


Replace the keyboard. Go to page 65.

Symptom	Action
<p>Characters appear automatically without your typing them</p>	<p>Replace the keyboard. Go to page 65.</p>
<p>Characters appear on your screen but not the cursor</p> 	<p>Replace the logic element. Go to page 69.</p>
<p>Your keyboard does not click.</p>	<p>Your IBM 3179 keyboard is not made to click, it beeps instead. You can make the keyboard beep by pressing the Clicker key. The volume of the beep can be controlled by the Audible Alarm Volume Control knob at the rear. If you cannot make your keyboard 'beeper' work, go to page 44.</p>

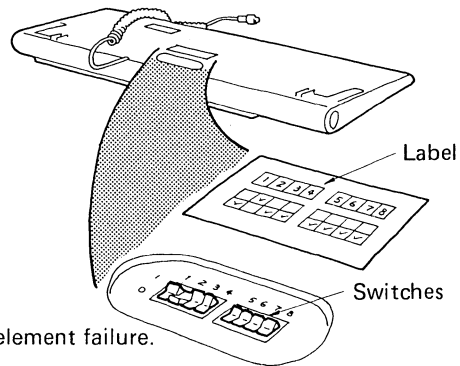
Symptom

Character on your screen differs from the key cap



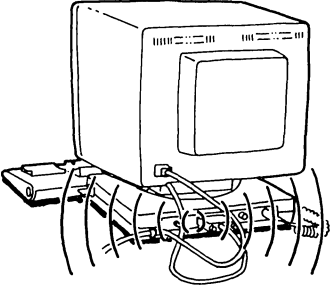
Action

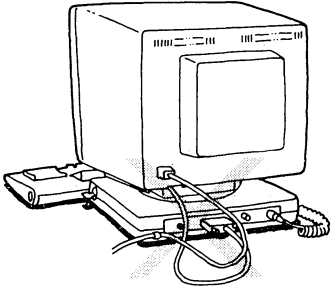
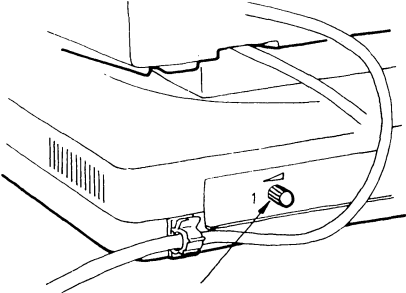
1. Set the I/O switch to O (Off).
2. Make sure the setup switches underneath the keyboard are set as shown on your label.
3. Do the switches match the label?
YES: Go to step 4.
NO: Correct the setup switch setting.
4. Set the I/O switch to I (On).
5. Does the problem still exist?
YES: Request assistance from your supervisor.
 The problem is either a setup error or a logic element failure.
NO: Return to normal operation.



If you have none of the above symptoms, go back to "Problem Solving-Symptoms" on page 15.

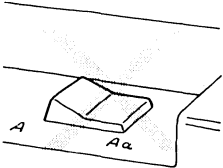
Audible Alarm Problems

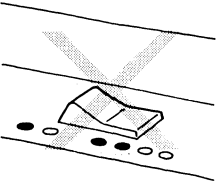
Symptom	Action
<p data-bbox="130 391 460 464">Audible alarm sounds continuously</p> 	<ol data-bbox="653 391 1268 583" style="list-style-type: none">1. Set the I/O switch to O (Off).2. Set the I/O switch back to I (On).3. Do you still have the same problem? <p data-bbox="715 629 1454 666">YES: Replace the logic element. Go to page 69.</p> <p data-bbox="715 712 1227 743">NO: Return to normal operation.</p>

Symptom	Action
<p data-bbox="134 177 594 208">Audible alarm does not sound</p> 	<ol data-bbox="657 177 1738 647" style="list-style-type: none">1. Set the I/O switch to O (Off).2. Make sure the video cable is firmly connected to the logic element.3. Set the I/O switch to I (On).4. Turn the Audible Alarm Volume Control knob at the back of the logic element fully clockwise.5. Set the Test/Normal switch to Test.6. Do you still have the same problem? <p data-bbox="725 695 1464 726">YES: Replace the logic element. Go to page 69.</p> <p data-bbox="725 733 1234 764">NO: Return to normal operation.</p>  <p data-bbox="1547 746 2100 778">Audible Alarm Volume Control Knob</p>


If you have none of the above symptoms, go back to "Problem Solving-Symptoms" on page 15.

Monocase/Dualcase (A/A,a) Switch Problems

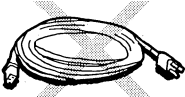
Symptom	Action
<p data-bbox="123 370 553 405">A/A,a switch does not work</p> 	<ol data-bbox="646 370 1975 564" style="list-style-type: none">1. Set the Test/Normal switch to Test.2. While looking at the test pattern, set the A/A,a switch back and forth several times.3. Do some of the characters change from uppercase to lowercase or vice versa? <p data-bbox="711 609 2021 643">YES: The problem is not in your IBM 3179. Request assistance from your supervisor.</p> <p data-bbox="711 687 1452 722">NO: Replace the logic element. Go to page 69.</p>
<p data-bbox="123 884 1536 918">If you don't have the above symptom, go back to "Problem Solving-Symptoms" on page 15.</p>	

Symptom	Action
<p>oo/oooo switch does not work.</p> 	<ol style="list-style-type: none"> 1. Set the Test/Normal switch to Test. 2. While looking at the test pattern, set the oo/oooo switch back and forth several times. 3. Do some of the characters change color? <p>YES: The problem is not in your IBM 3179. Request assistance from your supervisor.</p> <p>NO: Replace the logic element. Go to page 69.</p>
<p>If you don't have the above symptom, go back to "Problem Solving-Symptoms" on page 15.</p>	

Stand Problems

Symptom	Action
<p data-bbox="111 381 569 412">Broken or non-working stand</p> 	<ol data-bbox="639 381 1777 507" style="list-style-type: none">1. Remove the stand from the video and logic elements, refer to page 69.2. Call the number below for service. <ul data-bbox="708 554 1870 626" style="list-style-type: none">● In the continental U.S. and Puerto Rico (800) 428-2569 (toll free)● In Hawaii and Alaska (312) 986-7451 (collect)

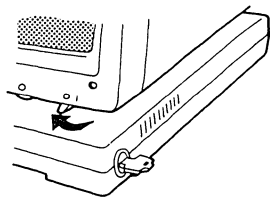
If you don't have the above symptom, go back to "Problem Solving-Symptoms" on page 15.

Symptom	Action
<p data-bbox="130 322 376 353">Bad power cord</p> 	<ol style="list-style-type: none"> <li data-bbox="653 322 1171 353">1. Set the I/O switch to O (Off). <li data-bbox="653 405 1826 436">2. Disconnect the power cord from the power outlet and the video element. <li data-bbox="653 482 1082 513">3. Unlock the cable clamp. <li data-bbox="653 570 1241 601">4. Call the number below for service. <ul style="list-style-type: none"> <li data-bbox="729 648 1884 679">● In the continental U.S. and Puerto Rico (800) 428-2569 (toll free) <li data-bbox="729 689 1873 721">● In Hawaii and Alaska (312) 986-7451 (collect)
<p data-bbox="130 835 1543 866">If you don't have the above symptom, go back to "Problem Solving-Symptoms" on page 15.</p>	

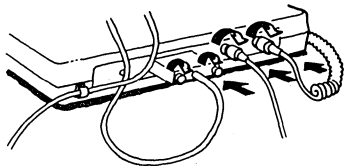
Problem Solving-Checkout

START

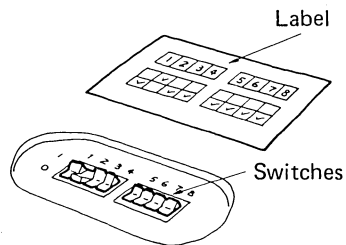
1 Set the I/O switch to O (Off).



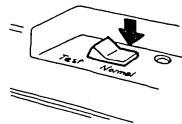
2 Make sure the video, keyboard, and communication cables are firmly connected to the logic element.



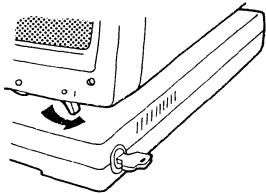
3 Set the setup switches underneath the keyboard to match the label.



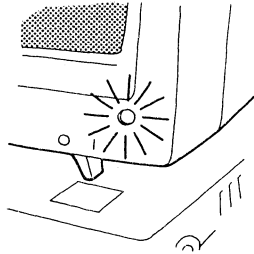
4 Set the Test/Normal switch to Normal.



5 Set the I/O switch to I (On).

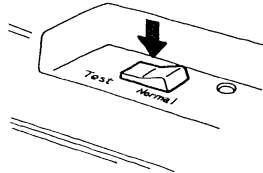


6 Does the Power-On light come on?

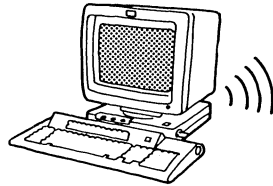


YES: Go to step 7.
NO: Go to "Power-On Light or Status Light Problems" on page 21.

7 Set the Test/Normal switch to Test.

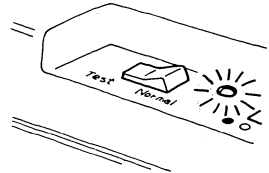


8 Does the audible alarm sound?



YES: Go to step 9.
NO: Go to "Audible Alarm Problems" page 44.

9 Is the Status light continuously blinking?

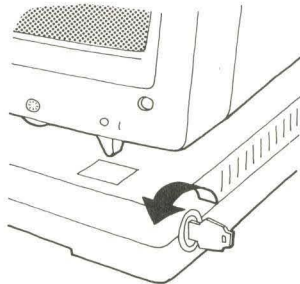


YES: Go to step 10.
NO: Replace the logic element. Go to page 69.

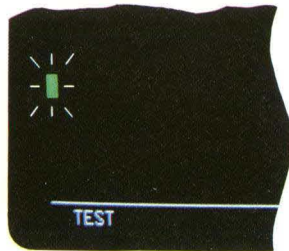
11 Is there something wrong with your screen?

YES: Go to "Display Problems" on page 25.
NO: Go to step 12.

12 Turn the security key counter-clockwise to Off.

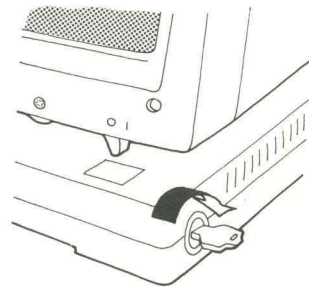


13 Do all the characters except the cursor, divider line, and TEST disappear?



YES: Go to step 14.
NO: Replace the logic element. Go to page 69.

14 Turn the security key clockwise to On.

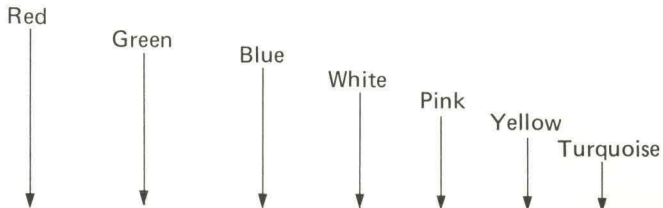


15 Do the seven colors appear on your screen?

YES: Go to step 16.

NO: Replace the video element. Go to page 61.

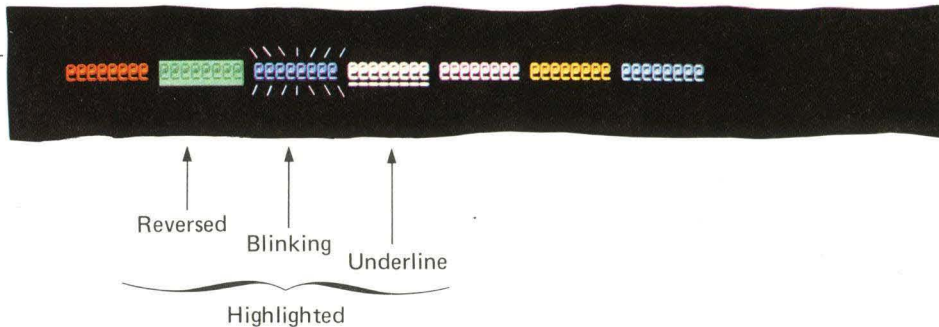
Red
Green
Blue
White
Pink
Yellow
Turquoise



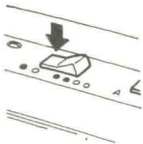
16 Do the highlighted characters appear on your screen?

YES: Go to step 17.

NO: Replace the logic element. Go to page 69.



21 Set the Base Color (oo/oooo) switch to oo.



22 Do you get these colors on your screen?

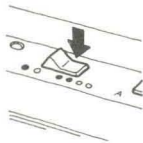
A screenshot of a screen with a black background. It displays four columns of characters, each column consisting of eight characters. The first column is white, the second is green, the third is green, and the fourth is white. The characters are a mix of letters and numbers, appearing as a test pattern.

White Green Green White

YES: Go to step 23.

NO: Replace the logic element. Go to page 69.

23 Set the Base Color (oo/oooo) switch to oooo.



24 Do you get these colors on your screen?

A screenshot of a screen with a black background. It displays four columns of characters, each column consisting of eight characters. The first column is red, the second is green, the third is blue, and the fourth is white. The characters are a mix of letters and numbers, appearing as a test pattern.

Red Green Blue White

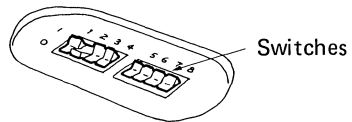
YES: Go to step 25.

NO: Replace the logic element. Go to page 69.

25 Do the 8 left-hand digit characters match your keyboard setup switch setting?

YES: Go to step 26.

NO: Replace the keyboard. Go to page 65.



Sample Switch Setting

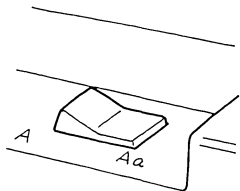
26 Are the 8 right-hand digit characters all zero (0)?

YES: Go to step 27.

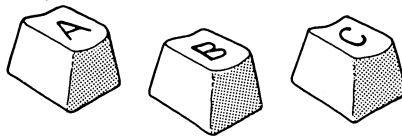
NO: Replace the keyboard. Go to page 65.

01000000 00000000

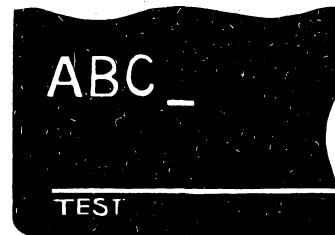
27 Make sure the A/A,a switch is set to A,a (Dualcase).



28 Key in each character.



29 Do the correct characters appear on your screen when you type in a key?





YES: Refer to step 30 and then go on to step 31.

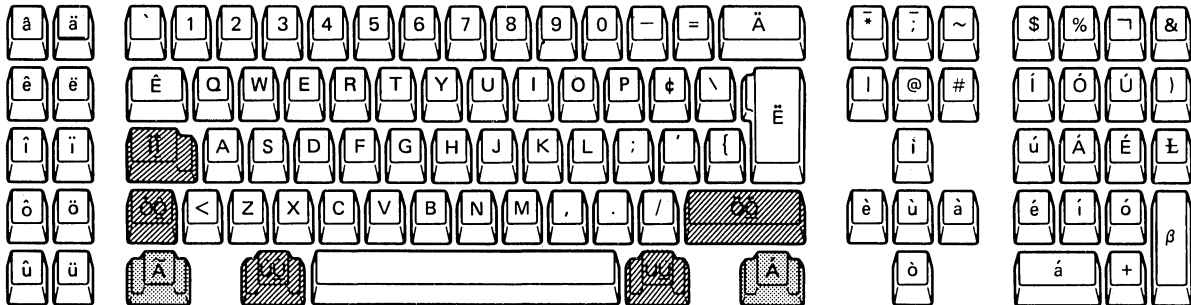
NO: Replace the keyboard. Go to page 65.

30 Your screen should show the corresponding characters as shown below when you type in a key.

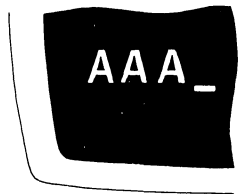


Note:

1.  keys are double-character entry keys which display a character with an underscore when being released.
2.  keys are double-character entry keys only in native mode.



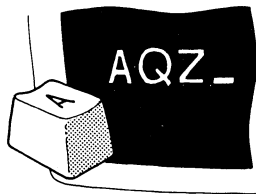
31 Do characters appear on your screen without your typing them?



YES: Replace the keyboard. Go to page 65.

NO: Go to step 32.

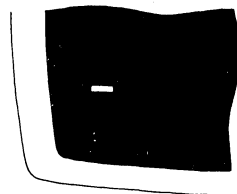
32 Do multiple characters appear when you type a key?



YES: Replace the keyboard. Go to page 65.

NO: Go to step 33.

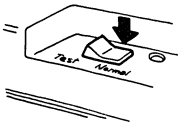
33 Is the cursor displayed?



YES: Go to step 34.

NO: Replace the logic element. Go to page 69.

34 Set the Test/Normal switch to Normal.

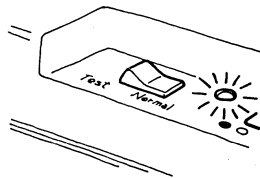


35 Does the test pattern disappear?

YES: Go to step 36.

NO: Replace the logic element. Go to page 69.

36 Is the Status light constantly on?



YES: Go to step 37.

NO: The problem is not in your IBM 3179. Request assistance from your supervisor.

37 Does the ready symbol appear on the bottom left corner of your screen?



YES: Go to FINISH.

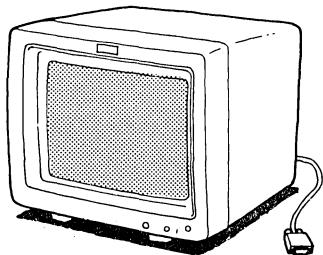
NO: The problem is not in your IBM 3179. Request assistance from your supervisor.

FINISH

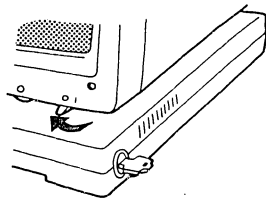
Video Element Removal

If you need IBM service, swap the failing element with a spare (if available) to verify the failure, and then call the number below.

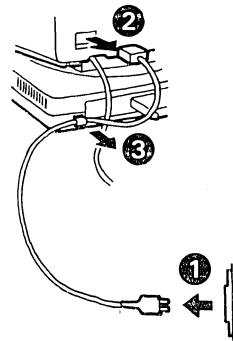
- In the continental U.S. and Puerto Rico (800) 428-2569 (toll free)
- In Hawaii and Alaska (312) 986-7451 (collect)



1 Set the I/O switch to O (Off).



2 Unplug the power cord from the power outlet and the video element, and unlock the cable clamp.

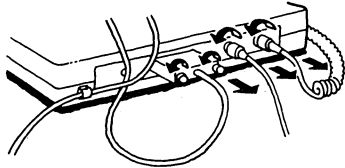


Video Element Removal(Continued)

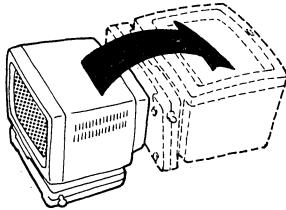
3 Unscrew and pull out all cables from the logic element.

CAUTION

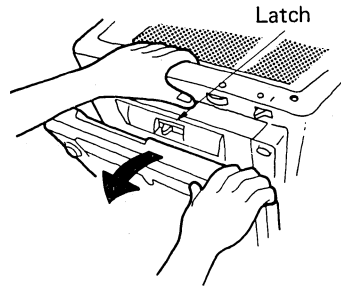
Do not disconnect the communication cable during an electrical storm.



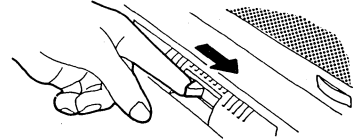
4 Turn the video element so that the screen faces up.



5 Pull the logic element slightly towards you and locate the gray latch.

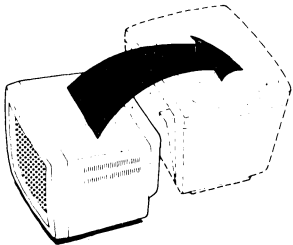


6 Hold the logic element and push the latch to the right to unlock the stand from the video element.

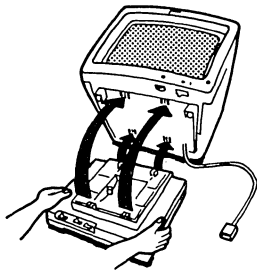


Video Element Replacement

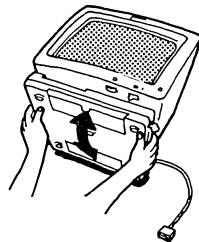
1 Turn the new video element so that the screen faces up.



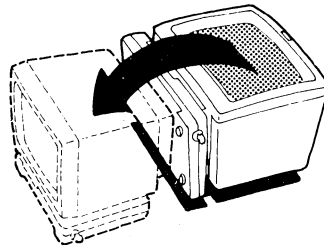
2 Attach the video stand to the new video element by inserting the hooks into the slots and lift the logic element slightly.



3 Make sure the logic element is locked onto the video element by shaking the logic element.

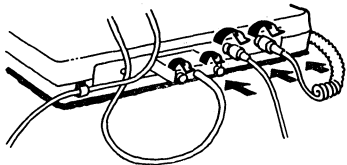


4 Turn the unit right side up.

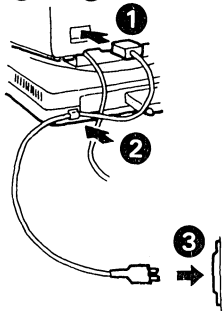


Video Element Replacement (Continued)

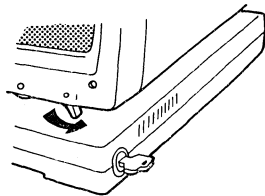
5 Connect all cables to the logic element. **CAUTION** Do not connect the communication cable during an electrical storm.



6 Make sure the I/O switch is set to Off (O). Connect the power cord to the video element and the power outlet, and lock the cable clamp. Leave about 60 cm (24 in) between **1** and **2**.



7 Set the I/O switch to I (On).

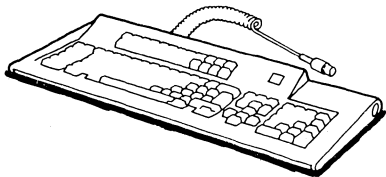


8 For instructions on packing the element go to page 73.

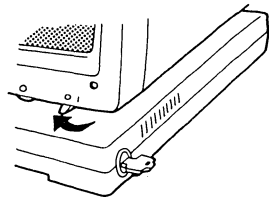
Keyboard Element Removal

If you need IBM service, swap the failing element with a spare (if available) to verify the failure, and then call the number below.

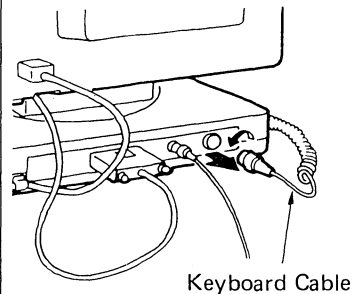
- In the continental U.S. and Puerto Rico (800) 428-2569 (toll free)
- In Hawaii and Alaska (312) 986-7451 (collect)



1 Set the I/O switch to O (Off).

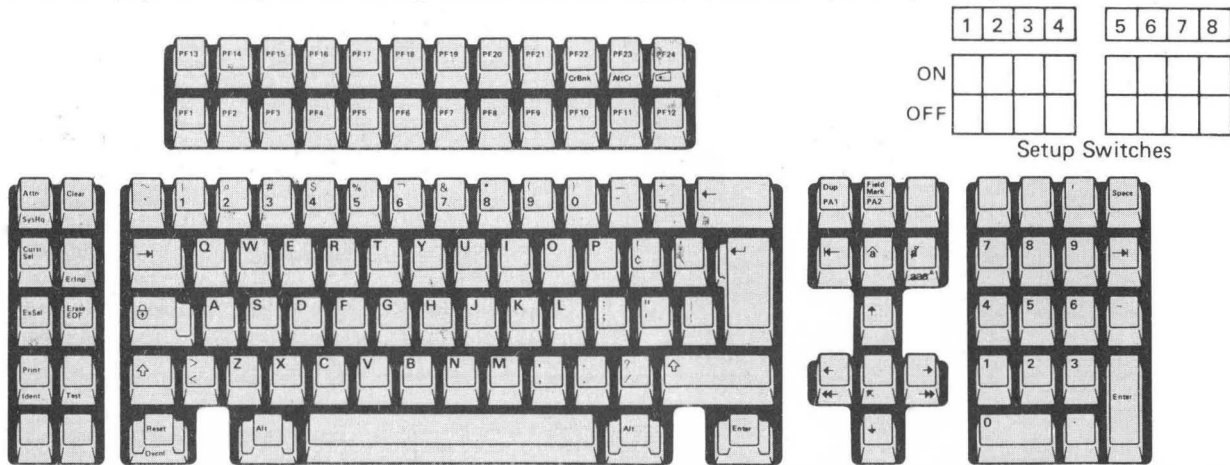


2 Unscrew and pull out the keyboard cable from the logic element.



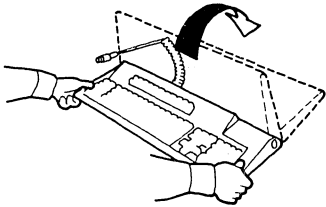
Keyboard Element Removal (Continued)

3 Record onto this page the setup switch settings underneath the keyboard and the layout of your keyboard.

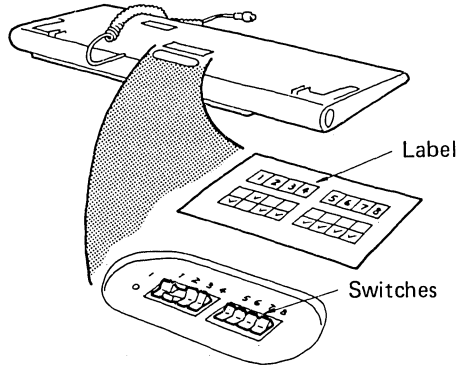


Keyboard Element Replacement

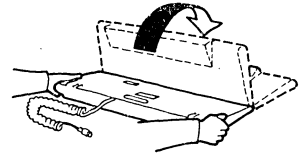
1 Turn the new keyboard over.



2 Copy the setup switch setting from the "Keyboard Layout Sheet" to the label, then set the setup switches according to the label. Shown below is only a sample switch setting.

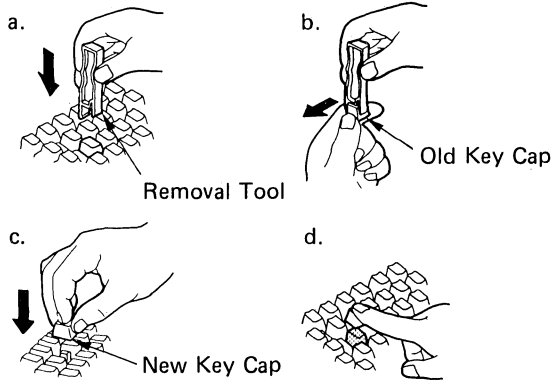


3 Turn the keyboard right side up.

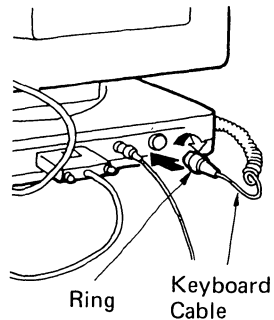


Keyboard Element Replacement (Continued)

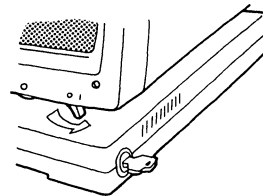
4 If required, change the keycaps to match the old keyboard layout.



5 Connect the keyboard cable to the logic element. Tighten the connector by turning the ring clockwise.



6 Set the I/O switch to I (On).

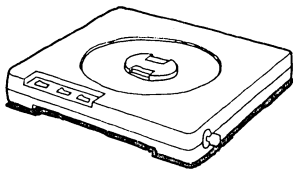


7 For instructions on packing the old element go to page 73.

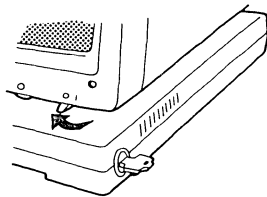
Logic Element Removal

If you need IBM service, swap the failing element with a spare (if available) to verify the failure, and then call the number below.

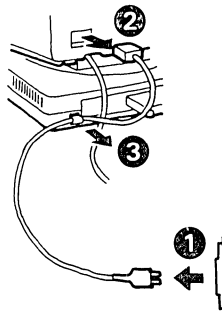
- In the continental U.S. and Puerto Rico
(800) 428-2569 (toll free)
- In Hawaii and Alaska
(312) 986-7451 (collect)



1 Set the I/O switch to O (Off).

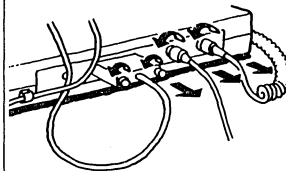


2 Unplug the power cord from the power outlet and the video element, and unlock the cable clamp.



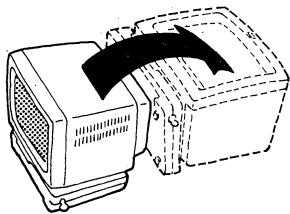
3 Unscrew and pull out all the cables from the logic element.

CAUTION
Do not disconnect the communication cable during an electrical storm.

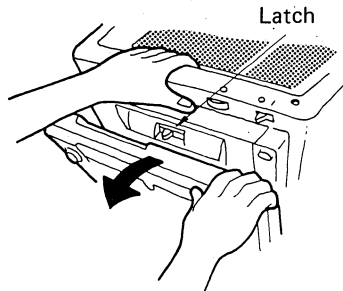


Logic Element Removal (Continued)

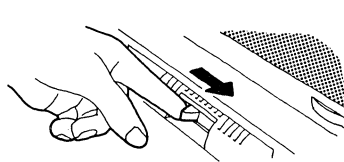
4 Turn the video element so that the screen faces up.



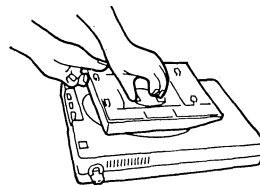
5 Pull the logic element slightly towards you and locate the gray latch.



6 Hold the logic element and push the latch to the right to unlock the stand from the video element.

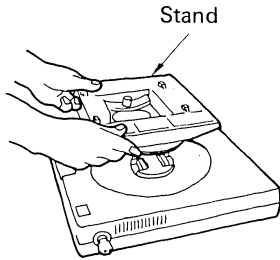


7 Pinch the two gray latches on the logic element to unlock the stand from the stand.

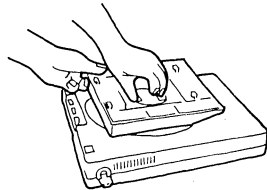


Logic Element Replacement

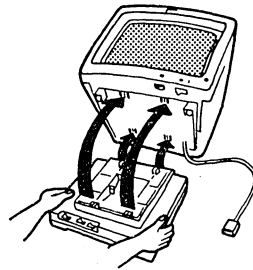
1 Set the stand on the new logic element and align the notch.



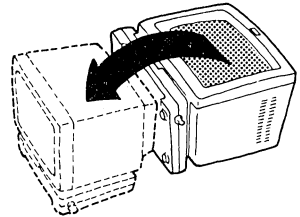
2 Lock the stand to the logic element by pinching the two gray latches on the logic element.



3 Lock the stand to the video element by inserting the hooks into the slots and lifting the logic element slightly.

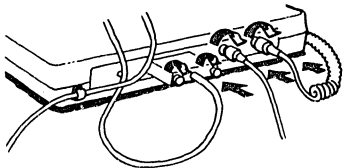


4 Turn the unit right side up.

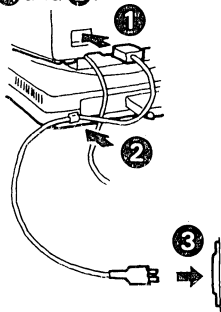


Logic Element Replacement (Continued)

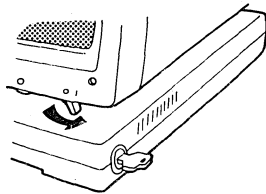
5 Connect all cables to the logic element. **CAUTION** Do not connect the communication cable during an electrical storm.



6 Make sure the I/O switch is set to Off (O). Connect the power cord to the video element and the power outlet, and lock the cable clamp. Leave about 60 cm (24 in) between ① and ②.



7 Set the I/O switch to I (On).



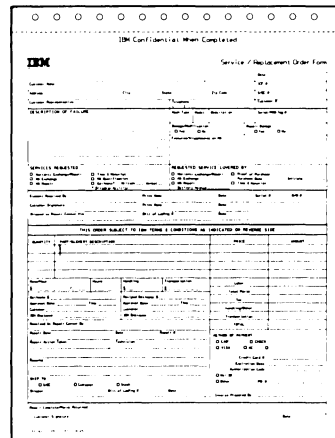
8 For instructions on packing the old element go to page 73.

Packing

For the user who needs the IBM Repair Center Maintenance Service:

1. Complete the IBM Service/Replacement Order Form (example) shown on the right.
2. The completed form should be packed in the designated IBM shipping container with the failing element and sent to the IBM Repair Center for repair.
3. To pack the failing element, follow the appropriate instructions for your failing element on the following pages.

Note: It is the user's responsibility to maintain the shipping containers. You may purchase them from the FE Branch Office or Parts Distribution Center (for U.S. only). IBM part numbers of these containers are: for the video element, 6316869; for the logic element, 6316868; for the keyboard element, 6316883; and for the master carton, 6317232. Any unserviceable shipping container received by the IBM Repair Center will be replaced before return shipment, and the user will be billed accordingly.

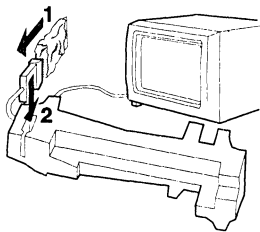


The image shows a scan of an IBM Service/Replacement Order Form. At the top, it says "IBM Confidential: When Completed". The form is divided into several sections. The top section contains fields for "Customer Name", "City", "State", "Zip Code", "Telephone", and "Fax". Below this is a section for "DESCRIPTION OF FAILURE" with fields for "Part No.", "Serial No.", and "Service No.". The middle section is titled "SERVICES REQUESTED" and "SERVICES REQUESTED BY" and contains checkboxes for various services such as "On-site Service", "On-site Support", "On-site Training", "On-site Repair", "On-site Replacement", "On-site Maintenance", "On-site Inspection", "On-site Diagnosis", "On-site Troubleshooting", "On-site Testing", "On-site Calibration", "On-site Adjustment", "On-site Repair/Replacement", "On-site Maintenance/Inspection", "On-site Training/Support", "On-site Troubleshooting/Diagnosis", "On-site Testing/Calibration", "On-site Adjustment/Repair/Replacement", "On-site Maintenance/Inspection/Training/Support", "On-site Troubleshooting/Diagnosis/Testing/Calibration", "On-site Adjustment/Repair/Replacement/Maintenance/Inspection/Training/Support", and "On-site Troubleshooting/Diagnosis/Testing/Calibration/Adjustment/Repair/Replacement/Maintenance/Inspection/Training/Support". The bottom section contains fields for "Requester Name and Title", "Requester Address", "Requester Telephone", "Requester Fax", "Requester E-mail", "Requester Filing", "Requester Signature", "Requester Date", "Requester Initials", "Requester Title", "Requester Department", "Requester Division", "Requester Office", "Requester Location", "Requester Country", "Requester City", "Requester State", "Requester Zip", "Requester Country Code", "Requester Phone Area Code", "Requester Phone Number", "Requester Fax Area Code", "Requester Fax Number", "Requester E-mail Address", "Requester Filing", "Requester Signature", "Requester Date", "Requester Initials", "Requester Title", "Requester Department", "Requester Division", "Requester Office", "Requester Location", "Requester Country", "Requester City", "Requester State", "Requester Zip", "Requester Country Code", "Requester Phone Area Code", "Requester Phone Number", "Requester Fax Area Code", "Requester Fax Number", "Requester E-mail Address".

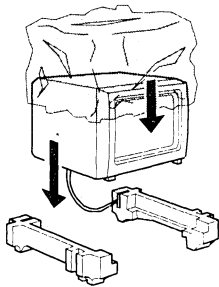
Video Element

The video element should be packed using the original or equivalent packaging material and returned to IBM for repair or replacement. *Note:* Keep the power cord.

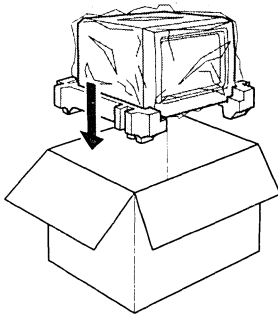
1



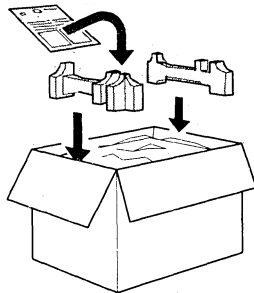
2



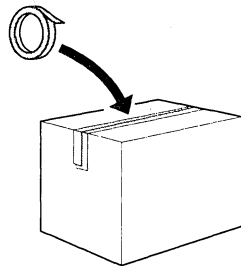
3



4



5

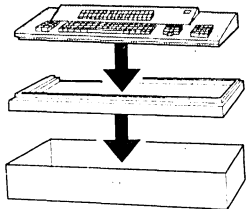


Keyboard

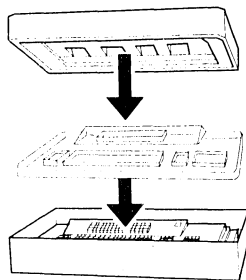
The keyboard should be packed using the original or equivalent packaging material and returned to IBM for repair or replacement.

Note: Remove and keep all accessory key caps.

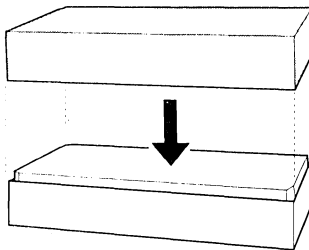
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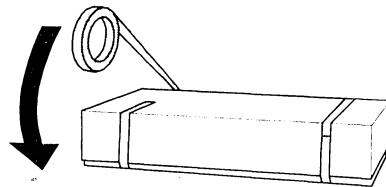
2



3



4

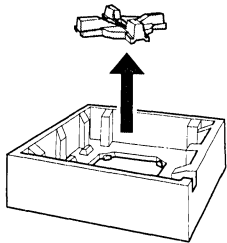


Logic Element

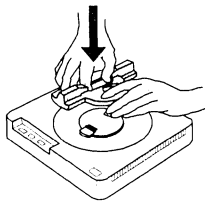
The logic element and both security keys (one inserted in the keylock of the logic element) should be packed using the original or equivalent packaging material and returned to IBM for repair or replacement.

Note: Keep the stand and this Operator Guide.

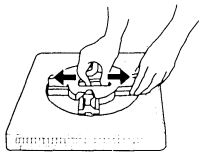
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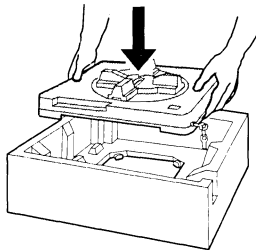
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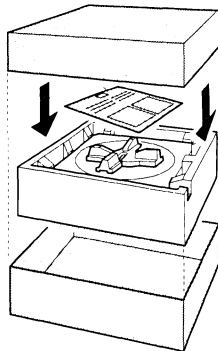
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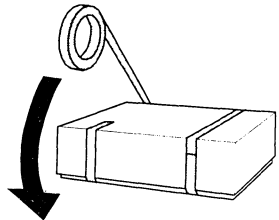
4



5

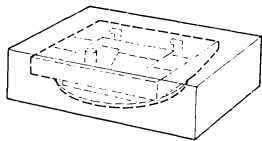


6



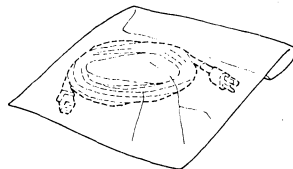
Stand

The broken stand should be packed using the original or equivalent packing material and returned to IBM for repair or replacement.



Power Cord

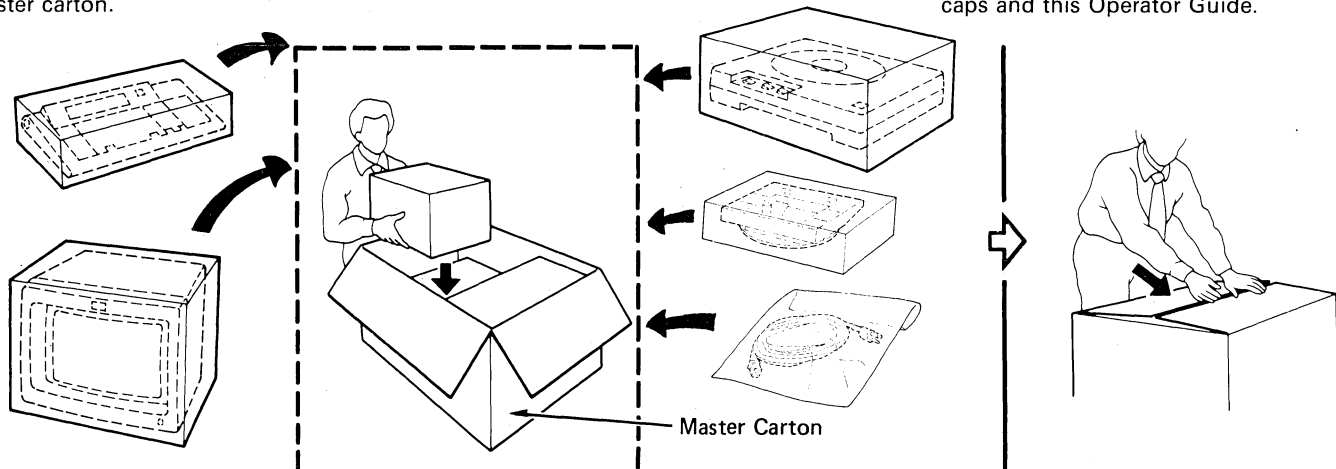
The bad power cord should be packed using a convenient packing material and returned to IBM for repair or replacement.



Three Elements in a Master Carton

If all three elements must be returned to IBM for repair or replacement, pack them in one master carton.

Note: Remove and keep all accessory key caps and this Operator Guide.



IBM 3179 Color Display Station
Operator Reference and Problem
Solving Guide
GA18-2180-1

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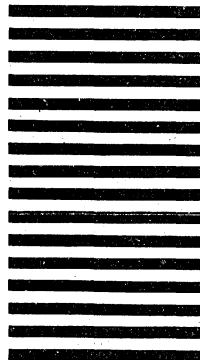
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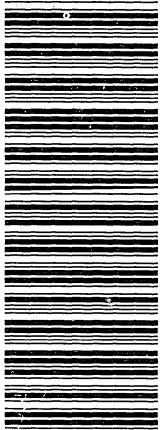
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