

## 3.2 Power-On Self-Test (POST)

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POST is a series of diagnostic tests that runs automatically on Compaq computers when the system is turned on. POST checks the following assemblies to ensure that the computer system is functioning properly:

- o Keyboard
- o Power supply
- o System board
- o Memory
- o Memory expansion boards
- o Controllers
- o Diskette drives
- o Hard drives

If POST finds an error in the system, an error condition is indicated by an audible and/or visual message. If an error code is displayed on the screen during POST or after resetting the system, follow the instructions in Table 3-1. The error messages and codes listed in Table 3-1 include all codes generated by Compaq products. Your system generates only those codes that are applicable to your configuration and options.

Table 3-1. POST Error Messages

Error Code	Audible Beeps	Probable Source of Problem	Action
A Critical Error occurred prior to this power-up	None	A catastrophic system error, which caused the server to crash, has been logged.	Run Diagnostics. Replace failed assembly as indicated.
101 - ROM Error	1 Long, 1 Short	System ROM checksum.	Run Diagnostics. Replace failed assembly as indicated.
101 - I/O ROM Error	None	Options ROM checksum.	Run Diagnostics. Replace failed assembly as indicated.
102 - System Board Failure	None	DMA, timers, etc.	Replace the system board. Run the Compaq System Configuration Utility.
104 - ASR-2 Timer Failure	None	System board failure.	Run Diagnostics. Replace failed

assembly as  
indicated.

162 - System Options Not Set	2 Short	Configuration incorrect.	Run the System Configuration Utility and correct.
163 - Time & Date Not Set	2 Short	Invalid time or date in configuration memory.	Run the System Configuration Utility and correct.
164 - Memory Size Error	2 Short	Configuration memory incorrect.	Run the System Configuration Utility and correct.
170 - Expansion Device Not Responding	None	EISA or PCI Expansion board failure.	Check board for secure installation. Replace the failed board if necessary.
172 - Configuration Nonvolatile Memory Invalid	None	Nonvolatile configuration corrupt or jumper installed.	Run the System Configuration Utility and correct.
Error Code	Audible Beeps	Probable Source of Problem	Action
172 - 1 Configuration Nonvolatile Memory Invalid	None	Nonvolatile configuration corrupt.	Run the System Configuration Utility and correct.
172-2 IRC Configuration Invalid	None	IRC enabled and video controller is in PCI slot on the secondary bus.	Move video controller to a PCI slot on the primary PCI bus.
173 - Slot ID Mismatch	None	Board replaced, configuration not updated.	Run the System Configuration Utility and correct.
174 - Configuration/ Slot Mismatch Device Not Found	None	EISA or PCI board not found.	Run the System Configuration Utility and correct.
175 - Configuration/ Slot Mismatch Device Found	None	EISA or PCI board added, configuration not updated.	Run the System Configuration Utility and correct.
176 - Slot with Not Readable ID Yields Valid ID	None	EISA or PCI board in slot that should contain an ISA board.	Run the System Configuration Utility and

correct.

177 - Configuration Not Complete	None	Incomplete EISA system Configuration.	Run the System Configuration Utility and correct.
178 - Processor Configuration Invalid	None	Processor type or step does not match configuration memory.	Run the System Configuration Utility and correct.
179 - System Revision Mismatch	None	A board was installed that has a different revision date.	Run the System Configuration Utility and correct.
180 - Log Reinitialized	None		
===== Error Code	Audible Beeps	Probable Source of Problem	Action
===== 201 - Memory Error	None	RAM failure.	Run Diagnostics. Replace failed assembly as indicated.
203 - Memory Address Error	None	RAM failure.	Run Diagnostics. Replace failed assembly as indicated.
205 - Cache Memory Error	None	Cache memory error.	Replace the processor board in the slot indicated.
205 - Option Cache Memory Error	None	Option Cache Memory Error.	Replace the option cache board.
206 - Cache Controller Error	None	Cache controller failure.	Run Diagnostics. Replace failed assembly as indicated.
207 - Invalid Memory Configuration - Check DIMM (SIMM) Installation	None	Memory module installed incorrectly.	Verify placement of memory modules.
208 - Invalid Memory Speed - Check DIMM (SIMM) Installation	1 Long, 1 Short	The speed of the memory is too slow, where: xx00 = expansion board SIMMs are too slow, or 00yy = system board SIMMs are too slow. xx and yy have corresponding bit set.	The speed of the memory modules must be 60 ns. Verify the speed of the memory modules installed and replace.

210 - Invalid Memory Configuration Detected. System halted.	None	Maximum amount of memory exceeded.	Verify installed memory does not exceed 512 MB.
211 - Cache Switch Set Incorrectly	None	Switch not set properly during installation or upgrade.	Verify switch settings.
===== Error Code	Audible Beeps	Probable Source of Problem	Action
===== 212 - System Processor Failed/Mapped out	1 Short	Processor in slot x failed.	Run Diagnostics and replace failed processor.
213 - Cache size Error	None	Invalid optional cache size.	Replace cache with 256K cache.
213 - System Processor Not Installed	1 Short	System processor configured for slot indicated is missing.	Install processor in the slot indicated or run the System Configuration Utility to remove the processor from the .CFG file.
214 - DC-DC Converter Failed	None	PowerSafe module (DC-DC Converter) failed.	Run Diagnostics. Replace failed assembly as indicated.
301 - Keyboard Error	None	Keyboard failure.	Turn off the computer, then reconnect the keyboard.
301 - Keyboard Error or Test Fixture Installed	None	Keyboard failure.	Replace the keyboard.
ZZ-301 - Keyboard Error	None	Keyboard failure. (ZZ represents the Keyboard Scan Code.)	1. A key is stuck. Try to free it. 2. Replace the keyboard.
303 - Keyboard Controller Error	None	System board, keyboard, or mouse controller failure.	1. Run Diagnostics 2. Replace failed assembly as indicated.
304 - Keyboard or System Unit Error	None	Keyboard, keyboard cable, or system board failure.	1. Make sure the keyboard is attached.

2. Run Diagnostics to determine which is in error.
3. Replace the part indicated.

Error Code	Audible Beeps	Probable Source of Problem	Action
40X - Parallel Port X Address Assignment Conflict	2 Short	Both external and internal ports are assigned to parallel port X.	Run the System Configuration Utility and correct.
402 - Monochrome Adapter Failure	1 Long, 2 Short	Monochrome display controller.	Replace the monochrome display controller.
501 - Display Adapter Failure	1 Long, 2 Short	Video display controller.	Replace the video board.
601 - Diskette Controller Error	None	Diskette controller circuitry failure.	<ol style="list-style-type: none"> <li>1. Make sure the diskette drive cables are attached.</li> <li>2. Replace the diskette drive and/or cable.</li> <li>3. Replace the system board.</li> </ol>
605 - Diskette Drive Type Error	2 Short	Mismatch in drive type.	Run the System Configuration Utility to set diskette type correctly.
702 - A coprocessor has been detected that was not reported by CMOS	None	Installed coprocessor not configured.	Run the System Configuration Utility and correct.
703 - CMOS reports a coprocessor that has not been detected	2 Short	Coprocessor or configuration error.	<ol style="list-style-type: none"> <li>1. Run the System Configuration Utility and correct.</li> <li>2. Replace the coprocessor.</li> </ol>
1151 - Com Port 1 Address Assignment Conflict	2 Short	Both external and internal serial ports are assigned to COM1.	Run the System Configuration Utility and correct.
1152 - Com Port 2, 3, or 4	2 Short	Both external and internal serial ports	Run the System Configuration

Address are assigned to COM2, Utility and  
 Assignment COM3 or COM4. correct.  
 Conflict

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Error      Audible   Probable Source      Action
Code      Beeps    of Problem
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1600 - Server Manager/R Failure      None      Server Manager/R board failure. Error code displays after error message.      Run Diagnostics. Replace failed assembly as indicated.
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1610 - Temperature violation detected. Waiting for system to cool      2 Short   Ambient system temperature too hot.      Check fan in system environment.
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1611 - Fan (fan description) failure detected      2 Short   Required fan has failed.      Check fans.
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1611 - Fan (fan description) not present      2 Short   Fan not present.      Make sure fans are plugged in.
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1612 - Primary power supply failure.      2 Short   Primary power supply has failed.      Replace power supply as soon as possible.
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1613 - Low System Battery      None      Real time clock system battery is running low on power.      Run Diagnostics. Replace failed assembly as indicated.
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1614 - Redundant fan failure detected      None
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1615 - Power Supply Failure in Bay X      None      A power supply has failed.      Replace or check specified power supply.
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1616 - Power Supply Configuration Error      2 Long, 2 Short   Single power supply system is installed in Bay 2 and not in Bay 1.      Move power supply from Bay 2 to Bay 1.
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1701 - SCSI Controller Failure      None      A test on the Fast SCSI-2 Controller failed.      Run Diagnostics. Replace failed assembly as indicated.
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Error      Audible   Probable Source      Action
Code      Beeps    of Problem
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1702 - SCSI cable error detected.      None      Incorrect cabling.      1. For integrated SCSI controllers,
  
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System halted.

ensure that the internal connector has SCSI termination attached.

2. For option card SCSI controllers, ensure that only one of the two internal connectors has termination attached.

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1703 - SCSI          None          Incorrect cabling.          Ensure that the
cable error detected.      Internal SCSI cable not attached to system board connector.
System halted.
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1704 -              None          System attempted to perform a virtual mode disk operation without virtual mode memory services.
Unsupported Virtual Mode Disk Operation.
DOS Driver Required.
System halted.
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1705 - Locked      None          SCSI bus failure          Run Diagnostics.
SCSI Bus Detected.        System halted.            Replace failed assembly as indicated.
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1730 - Fixed Disk  None          Fixed disk drive error.   Run the System Configuration Utility and correct.
0 does not support DMA Mode
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Error Code          Audible Beeps      Probable Source of Problem          Action
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1731 - Fixed Disk  None          Fixed disk drive error.   Run the System Configuration Utility and correct.
1 does not support DMA Mode
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1740 - Fixed Disk  None          Fixed disk drive error.   Run the System Configuration Utility and correct.
0 failed Set Block Mode command
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1741 - Fixed Disk  None          Fixed disk drive error.   Run the System Configuration Utility and
Block Mode
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command			correct.
1750 - Fixed Disk 0 failed Identify command	None	Fixed disk drive error.	Run the System Configuration Utility and correct.
1751 - Fixed Disk 1 failed Identify command	None	Fixed disk drive error.	Run the System Configuration Utility and correct.
1760 - Fixed Disk 0 does not support Block Mode	None	Fixed disk drive error.	Run the System Configuration Utility and correct.
1761 - Fixed Disk 1 does not support Block Mode	None	Fixed disk drive error.	Run the System Configuration Utility and correct.
1764 - Slot x Drive Array - Capacity Expansion Process is temporarily disabled (followed by one of the following): Expansion will resume when Array Accelerator has been reattached. Expansion will resume when Array Accelerator has been replaced. Expansion will resume when Array Accelerator RAM allocation is successful. Expansion will resume when Array Accelerator battery reaches full charge. Expansion will resume when automatic data recovery has been completed.			Reattach or replace Array Accelerator, wait until the Array Accelerator batteries have charged, or for Automatic Data Recovery to complete, as indicated.
1765 - Slot x Drive Array Option ROM Appears to Conflict With an ISA Card. ISA cards with 16-bit memory cannot be configured in memory range C000 to DFFFF along with the SMART-2/E 8-bit Option ROM due to EISA bus limitations. Please remove or reconfigure your ISA card.			Remove or reconfigure conflicting ISA cards. Disable "shared memory" on any ISA network cards that may be installed.
1766 - Slot x Drive Array requires System ROM Upgrade. Run Systems ROMPaq Utility.			Run the latest Systems ROMPaq Utility to upgrade your System ROMs.
1767 - Slot x Drive Array Option ROM is Not Programmed Correctly or may Conflict with the Memory Address Range of an ISA Card. Check the Memory Address Configuration of installed ISA Card(s) or run Options ROMPaq Utility to attempt SMART-2/E Option ROM Reprogramming.			Remove or reconfigure conflicting ISA cards, especially any cards that are not recognized by the System Configuration Utility. Try reprogramming the SMART-2/E



Controller's ROMs using the latest Options ROMPaq (version 2.29 or higher).

1768 - Slot x Drive Array - Resuming logical drive expansion process.	None	SMART-2 Controller error	No action required. Appears whenever a controller reset or power cycle occurs while array expansion is in progress.
1769 - Slot x Drive Array - Drive(s) disabled due to failure during expand. Select F1 to continue with logical drives disabled. Select F2 to accept data loss and to re-enable logical drives.	None	SMART-2 Controller error.	Data has been lost while expanding the array, therefore the drives, have been temporarily disable. Press F2 to accept the data loss and re-enable the logical drives. Restore data from backup.
1771 - Primary Disk Port Address Assignment Conflict	None	Internal and external hard drive controllers are both assigned to the primary address.	Run the System Configuration Utility and correct.
1772 - Secondary Disk Port Address Assignment Conflict	None	Address Assignment Conflict. Internal and external hard drive controllers are both assigned to the secondary address.	Run the System Configuration Utility and correct.
1773 - Primary Fixed Disk Port Assignment Conflict	None	Fixed disk drive error.	Run the System Configuration Utility and correct.
1774 - Slot x Drive Array - Obsolete data found in Array Accelerator. Select F1 to discard contents of Array Accelerator. Select F2 to write contents of Array Accelerator to drives.	None	SMART-2 Controller error.	Data found in Array Accelerator is older than data found on drives. Press F1 to discard the older data in the Array Accelerator and retain the newer data on the drives.

Error Code	Audible Beeps	Probable Source of Problem	Action
1776 - Drive Array - SCSI Port Termination Error	None	External and internal SCSI drives are both configured to Port 1.	Re-configure drives.
1777 - Drive Array External Drive Subsystem Error	None	Cooling fan failure, internal temperature alert or open side panel.	Inspect for cooling fan failure or open side panel.
1778 - Drive Array resuming Automatic Data Recovery process	None	This message appears whenever a controller reset or power cycle occurs while Automatic Data Recovery is in progress.	No action necessary.
1779 - Drive Array Controller detects replacement drives	None	Intermittent drive failure and/or possible loss of data.	If this message appears and drive X has not been replaced, this indicates an intermittent drive failure. This message also appears once immediately following drive replacement whenever data must be restored from backup.
1780 - Disk 0 Failure	None	Hard drive/format error	Run Diagnostics. Replace failed assembly as indicated.
1781 - Disk 1 Failure	None	Hard drive/format error	Run Diagnostics. Replace failed assembly as indicated.
1782 - Disk Controller Failure	None	Hard disk drive circuitry error.	Run Diagnostics. Replace failed assembly as indicated.
1784 - Drive Array Drive Failure, Physical Drive	None	Defective drive and/or cables.	Check for loose cables. Replace defective drive X and/or cable(s).
1785 - Drive Array not	None	Configuration error.	Run the System Configuration

Configured

Utility and correct.

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1786 - Drive      None      Interim Data Recovery
Array Recovery   mode. Data has not been
Needed. The      recovered yet.
following
drive(s) need
Automatic Data
Recovery: Drive
X. Select "F1"
to continue with
recovery of data
to drive(s).
Select "F2" to
continue without
recovery of data
to drive(s).

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Press F1 key to
allow Automatic
Data Recovery to
begin. Data will
automatically be
restored to drive
X now that the
drive has been
replaced or now
seems to be
working.
- Or -
Press the F2 key
and the system
continue to
operate in the
Interim Data
Recovery mode.
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1787 - Drive      None      Hard drive X failed or
Array Operating  cable is loose or
in Interim      defective. Following a
Recovery Mode.  system restart, this
Physical drive   message reminds you
replacement      that drive X is
needed: Drive X  defective and fault
tolerance is being
used.

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1. Replace drive X
as soon as
possible.
2. Check loose
cables.
3. Replace
defective
cables.
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* 1788 -          None      Drives are not
Incorrect Drive  installed in their
Replaced: Drive X original positions,
Drives(s) were  so the drives have been
incorrectly      disabled. See note
replaced: Drive Y below.
Select "F1" to
continue - drive
array will remain
disabled. Select
"F2" to reset
configuration -
all data will be
lost.

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Reinstall the
drives correctly
as indicated.
Press F1 to
restart the
computer with
the drive array
disabled.
-Or-
Press F2 to use
the drives as
configured and
lose all the data
on them.
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\* The 1788 error message might also be displayed inadvertently due to a bad power cable connection to the drive or by noise on the data cable. If this message was due to a bad power cable connection, but not due to an incorrect drive replacement, repair the connection and press F2.

-Or-

If this message was not due to a bad power cable connection, and no drive replacement took place, this could indicate noise on the data cable. Check cable for proper routing.

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Error      Audible   Probable Source
Code       Beeps     of Problem      Action
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1789 - Drive not Responding, Physical Drive Check cables or replace physical drive X. Select "F1" to continue - drive array will remain disabled. Select "F2" to fail drive(s) that are not responding - Interim Recovery Mode will be enabled if configured for fault tolerance.	None	Cable or hard drive failure.	<ol style="list-style-type: none"> <li>1. Check the cable connections.</li> <li>2. If cables are connected, replace the drive.</li> <li>3. If you do not want to replace the drives now, press F2.</li> </ol>
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1790 - Disk 0 Configuration Error	None	Hard drive error or wrong drive type.	Run the System Configuration Utility and Diagnostics and correct.
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1791 - Disk 1 Error	None	Hard drive error or wrong drive type.	Run the System Configuration Utility and Diagnostics and correct.
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1792 - Drive Array Reports Valid Data Found in Array Accelerator. Data will automatically be written to drive array.	None	This indicates that while the system was in use, power was interrupted while data was in the Array Accelerator memory. Power was then restored within eight to ten days, and the data in the Array Accelerator was flushed to the drive array.	No action necessary; no data has been lost. Perform orderly system shut-downs to avoid data remaining in the Array Accelerator.
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1793 - Drive Array - Array Accelerator Battery Depleted - Data Lost (Error message 1794 also displays.)	None	This indicates that while the system was in use, power was interrupted while data was in the Array Accelerator memory. Array Accelerator batteries failed. Data in Array Accelerator has been lost.	Power was not restored within eight to ten days. Perform orderly system shut-downs to avoid data remaining in the Array Accelerator.
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Error Code	Audible Beeps	Probable Source of Problem	Action
1794 - Drive Array - Array	None	This is a warning that the battery charge is	Replace the Array Accelerator board

Accelerator Battery Charge Low. Array Accelerator is temporarily disabled. Array Accelerator will be re-enabled when battery reaches full charge.	below 75%. Posted writes are disabled.	if batteries do not recharge within 36 power-on hours.
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1795 - Drive Array - Array Accelerator Configuration Error. Data does not correspond to this drive array. Array Accelerator is temporarily disabled.	None	This indicates that while the system was in use, power was interrupted while data was in the Array Accelerator memory. The data stored in the Array Accelerator does not correspond to this drive array.	1. Match the Array Accelerator to the correct drive array.  - Or -  2. Run the System Configuration Utility to clear the data in the Array Accelerator.
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1796 - Drive Array - Array Accelerator Not Responding. Array Accelerator is temporarily disabled.	None	Array Accelerator is defective or has been removed.	1. Check that the Array Accelerator is properly seated.  2. Run the System Configuration Utility to re-configure the Compaq IDA-2 without the Array Accelerator.
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1797 - Drive Array - Array Accelerator Read Error Occurred. Data in Array Accelerator has been lost. Array Accelerator is disabled.	None	Hard parity error while reading data from posted writes memory.	Enable Array Accelerator.
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Error Code	Audible Beeps	Probable Source of Problem	Action
1798 - Drive Array - Array Accelerator Write Error Occurred. Array Accelerator is disabled.	None	Hard parity error while writing data to posted writes memory.	Enable Array Accelerator.

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1799 - Drive	None	Volume failed due to	Press F1 to
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Array - Drive(s) Disabled due to Array Accelerator Data Loss. Select "F1" to continue with logical drive disabled. Select "F2" to accept data loss and to re-enable logical drives.		loss of data in posted-writes memory.	continue with logical drives disabled or F2 to accept data loss and re-enable logical drive.
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Beeps only: 2 Long + 2 Short	2 Long 2 Short	Power is cycled. Temperature too hot. Processor fan not installed or spinning.	Check fans.
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(Run System Configuration Utility = "F10" key)	None	A configuration error occurred during POST.	Press F10 to run System Configuration Utility.
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(RESUME = "F1" KEY)	None	As indicated to continue.	Press the F1 key.
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