



Troubleshooting

To better help our customers - this HP Laserjet 3200 series troubleshooting page is simply a guide / additional information for your convenience, as you search for assistance in repairing your machine. Although this information is provided for your convenience it is recommended, for the most part, that a technician inspects your office equipment.

It is recommended to consult with a professional when ordering your printer part(s).

Chapter contents

Service mode functions

Shop with us while you troubleshoot.

- * HP oem parts
- * HP LaserJet maintenance kits
- * Toners for your printer
- * HP fuser assembly units
- * HP fuser kit 110v & 220v
- * Parts assemblies for printers
- * Service maintenance parts
- * Color laserJet printers
- * LaserJet printers and parts
- * Hard to find officejet parts
- * Hard to find deskjet parts

User-friendly [SmartSearch!](#)

Service mode functions

Secondary service menu

Use the secondary service menu to perform various tests and print service reports. Below is a hierarchical diagram of the secondary service menu:

Main menu	Submenu	Submenu
Secondary service	Secondary reports	Continuous self-test Data store report Ext keypad map
	Scanline data	Red-corrected Blue-corrected Green-corrected Red-uncorrected Blue-uncorrected Green-uncorrected

To gain access to the secondary service menu

- 1 Make sure that the control panel display reads `READY`.
- 2 Press `ENTER/MENU`.
- 3 Press `1` on the one-touch keypad.
- 4 Use the `<` and `>` keys to navigate to the secondary service menu.

Developer's menu

Use the developer's menu to adjust fax data store parameters and to run various tests. Below is a hierarchical diagram of the developer's menu:

Main menu	Submenu	Submenu
Developer's menu	R/W parameter	
	Monitor test	Onhook monitor Offhook monitor Eavesdrop monitor Signal power monitor
	LIU test	LIU inputs LIU ID
	Loopback test	
	Transmit test	

To gain access to the developer's menu:

- 1 Make sure that the control panel display reads `READY`.
- 2 Press `ENTER/MENU`.
- 3 Press `*` and `#` simultaneously and then release both keys.
- 4 Use the `<` and `>` keys to navigate to the developer's menu.

After you enter the developer's menu, the control panel display should read `R/W PARAMETER`.

To adjust a country code parameter

Note

Changing the country code does not change the language.

- 1 Make sure that the control panel display reads **R/W PARAMETER**.
- 2 Press **3** on the control panel keypad and then press **ENTER/MENU**.
- 3 Use the control panel keypad to input the country code (see table 14 below) and then press **ENTER/MENU**.

CAUTION

Changing country code parameters can render the product illegal or inoperable.

Table 14. Country codes

Country	Country code	Country	Country Code
Argentina	16	Malaysia	27
Australia	23	Mexico	13
Austria	34	Netherlands	35
Belgium	45	New Zealand	19
Canada	14	Norway	43
China	6	Poland	56
Denmark	40	Portugal	50
Finland	46	Russia	64
France	47	Singapore	30
Germany	39	Spain	55
Greece	49	Sweden	41
Hong Kong	29	Switzerland	36
Hungary	62	Taiwan	7
Ireland	44	Ukraine	63
Israel	21	United Kingdom	31
Italy	51	United States	15
Korea	4		

- 4 Power-cycle the product by unplugging (or turning off) the product and then plugging back in (or turning on) the product.

To adjust a fax data store parameter

CAUTION

When you adjust fax data store parameters, the product does not alert you to incorrect input values. Changing fax data store parameters can render the product illegal or inoperable.

- 1 Enter the parameter ID number or use the < and > keys to locate the parameter you want to change. The control panel display shows the current setting.

Note

See tables 15 and 16 for complete lists of fax data store parameters.

- 2 Enter the new value for the fax data store parameter and then press **ENTER/MENU**.

Table 15. Parameter ID numbers (Fall, 2000 release)

ID#	Parameter name	Default	ID#	Parameter name	Default
2	LIU ID	0	26	Cng tone threshold	350
3	LIU country	15	27	Cng tone bandwidth	60
4	Auto answer	1	28	Sidetone frequency	3
5	Ring cadences	0	29	Sidetone frequency 1	1000
6	Ring cadences count	5	30	Sidetone frequency 2	1350
7	Ring det low freq	15	31	Sidetone freq 1 band	60
8	Ring det high freq	68	32	Sidetone freq 2 band	60
9	Ring env min on	150	33	Silence detect min	3000
10	Ring env max on	8000	34	Silence det noise tm	1000
11	Ring env min off	1000	35	DTMF 1st character	49
12	Ring env max off	8000	36	DTMF 2nd character	50
13	Ring burst min on	100	37	DTMF 3rd character	51
14	Ring burst min off	100	38	Offhook delay	5000
15	Minimum number of rings	1	39	Offhook shunt	0
16	Maximum number of rings	9	40	Modem loop current	0
17	Silence detection	0	41	Modem lp cur min on	0
18	Parallel detection	1	42	Modem lp cur eval tm	0
19	Eavesdrop evaluatn	60	43	Phone loop current	1
20	Cng tone min on	400	44	Phone lp cur min on	50
21	Cng tone max on	600	45	Phone lp cur min off	1000
22	Cng tone min off	2400	46	Line type	0
23	Cng tone max off	3600	47	PSTN pre-dial pause	0
24	Cng tone max dropout	100	48	PBX pre-dial pause	0
25	Cng tone min count	2	49	PSTN blind dial wait	3000

Table 15. Parameter ID numbers (Fall, 2000 release) (continued)

ID#	Parameter name	Default	ID#	Parameter name	Default
50	PBX blind dial wait	2000	88	Open flash	800
51	Pause time	3000	89	Phone inact abort	59
52	Max number of pauses	36	90	Busy tone detect	1
53	PSTN dial tone eval	10000	91	Busy tone frequency	5
54	PSTN dial tone freq	5	92	Busy tone min on	150
55	PSTN dial tn det min	500	93	Busy tone max on	750
56	PSTN dial tn min on	0	94	Busy tone min off	150
57	PSTN dial tn max on	0	95	Busy tone max off	750
58	PSTN dial tn min off	0	96	Complex impedance	0
59	PSTN dial tn max off	0	97	Busy tone freq 1	620
60	PSTN dl tn dt thresh	320	98	Busy tone freq 2	480
61	PSTN dial tn freq 1	350	99	Busy tn freq 1 band	200
62	PSTN dial tn freq 2	440	100	Busy tn freq 2 band	200
63	PSTN dial tn freq 3	0	101	Busy tn detect time	10000
64	PSTN dl tn fq1 band	100	102	CED/busy threshold	470
65	PSTN dl tn fq2 band	100	103	Eavesdrop gain	50
66	PSTN dl tn fq3 band	0	106	Modem equalizer	0
67	Special dial tone eval	0	107	Receive loss	50
68	Special dl tn frequency	0	108	Transmit loss	80
69	Special dl tn det min	0	109	DTMF high group	60
70	Special dial tn min on	0	110	DTMF low group	20
71	Special dial tn max on	0	111	Carrier detect level	440
72	Special dial tn min off	0	112	Tone transmit level	100
73	Special dial tn max off	0	113	Data transmit level	100
74	Special dl tn dt thresh	0	114	V17 14400 eqm thresh	48
75	Special dial tone freq1	0	115	V17 12000 eqm thresh	128
76	Special dial tone freq2	0	116	V17 9600 eqm thresh	440
77	Special dial tone freq3	0	117	V17 7200 eqm thresh	1024
78	Special dl tn fq1 band	0	118	V33 14400 eqm thresh	65535
79	Special dl tn fq2 band	0	119	V33 12000 eqm thresh	65535
80	Special dl tn fq3 band	0	120	V29 9600 eqm thresh	900
81	Tone/pulse	0	121	V29 7200 eqm thresh	1700
82	Pre-shunt	0	122	V29 4800 eqm thresh	65535
83	Post-shunt	0	123	V27 4800 eqm thresh	2400
84	Pulse break	60	124	V27 2400 eqm thresh	5500
85	Pulse make	40	125	Echo protect	0
86	Pulse interdigit	800	126	TCF 0 check	80
87	DTMF duration	70	127	No carrier abort	10000

Table 15. Parameter ID numbers (Fall, 2000 release) (continued)

ID#	Parameter name	Default	ID#	Parameter name	Default
129	V34 block err thresh	9011	165	Receive ecm abort	180
130	T.30 ans inact abort	30	166	Receive non-ecm abrt	13
131	T.30 orig inact abort	59	167	Receive rtn thresh	10
132	T.30 t5 timer	240	168	Send ecm abort	300
133	T.30 bzt	0	169	Send non-ecm abort	300
134	T.30 man dial abort	0	170	Ring noise enable	2
135	Redial on busy	1	171	Key beep enable	2
136	Redial on no answer	0	172	Monitor	0
137	Repeat timer 1	60	173	Ring volume	1
138	Repeat timer 2	300	174	Beep volume	1
139	Repeat count 1	1	175	Monitor volume	96
140	Repeat count 2	4	176	Contrast	0
141	Blacklist	0	178	Resolution	1
142	Paper size	2	179	Number of speed dials	100
143	No answer max redials	1	180	Fax additional wait	0
144	Monitor dial delay	5000	181	Compression factor	0
145	Scan minimum cycle	0	182	Doc memory size	1412
146	Copy minimum cycle	0	183	Auto fax log	1
147	Time format	0	184	Fax fixed reduction	100
148	Date format	0	185	Fax auto reduction	1
149	Language	0	186	Fax mem-out red	90
150	DIS maximum size	255	187	Fax max auto red	60
151	T.30 transmit resolut max	2	188	Fax backup receipt	1
152	T.30 transmit encode max	2	189	Transmit fail – non-jpeg	1
153	T.30 transmit rate max	26	190	Transmit fail – noncolor	0
154	T.30 transmit ecm	1	191	T.30 transmit color	0
155	T.30 transmit bft	0	192	T.30 receive color	1
156	T.30 transmit ecm size	256	193	CIOCA default	12
157	T.30 rcv resolut max	2	194	CIOCA eavesdrop	4
158	T.30 rcv encode max	2	195	CIOCB default us	44828
159	T.30 rcv rate max	26	196	CIOCB eavesdrop us	44830
160	T.30 receive ecm	1	197	CIOCB default euro	44830
161	T.30 receive bft	0	198	CIOCB eavesdrop euro	44830
162	T.30 receive mslt	0	199	CIOCB default row	44830
163	Ignore 1st dis	0	200	CIOCB eavesdrop row	44830
164	Pre-DCS delay	500	201	Fax_rx_disposition	1

Table 16. Parameter ID numbers (Spring, 2001 release)

ID#	Parameter name	Default	ID#	Parameter name	Default
2	LIU ID	*0	38	Offhook delay	*5000
3	LIU country	*15	39	Offhook shunt	*0
4	Auto answer	1	40	Modem loop current	0
5	Ring cadences	0	41	Modem lp cur min on	0
6	Ring cadences count	*5	42	Modem lp cur eval tm	0
7	Ring det low freq	*15	43	Phone loop current	1
8	Ring det high freq	*68	44	Phone lp cur min on	50
9	Ring env min on	*150	45	Phone lp cur min off	1000
10	Ring env max on	8000	46	Line type	0
11	Ring env min off	*1000	47	PSTN pre-dial pause	*0
12	Ring env max off	*8000	48	PBX pre-dial pause	0
13	Ring burst min on	*100	49	PSTN blind dial wait	*3000
14	Ring burst min off	*100	50	PBX blind dial wait	*2000
15	Minimum number of rings	*1	51	Pause time	*3000
16	Maximum number of rings	*9	52	Max number of pauses	36
17	Silence detection	0	53	PSTN dial tone eval	*10000
18	Parallel detection	1	54	PSTN dial tone freq	*5
19	Eavesdrop evaluatn	60	55	PSTN dial tn det min	*500
20	Cng tone min on	400	56	PSTN dial tn min on	0
21	Cng tone max on	600	57	PSTN dial tn max on	0
22	Cng tone min off	2400	58	PSTN dial tn min off	0
23	Cng tone max off	3600	59	PSTN dial tn max off	*0
24	Cng tone max dropout	100	60	PSTN dl tn dt thresh	*320
25	Cng tone min count	2	61	PSTN dial tn freq 1	*350
26	Cng tone threshold	*350	62	PSTN dial tn freq 2	*440
27	Cng tone bandwidth	60	63	PSTN dial tn freq 3	*0
28	Sidetone frequency	3	64	PSTN dl tn fq1 band	*100
29	Sidetone frequency 1	1000	65	PSTN dl tn fq2 band	*100
30	Sidetone frequency 2	1350	66	PSTN dl tn fq3 band	*0
31	Sidetone freq 1 band	60	67	Special dial tone eval	*0
32	Sidetone freq 2 band	60	68	Special dl tn frequency	*0
33	Silence detect min	3000	69	Special dl tn det min	*0
34	Silence det noise tm	1000	70	Special dial tn min on	0
35	DTMF 1st character	49	71	Special dial tn max on	0
36	DTMF 2nd character	50	72	Special dial tn min off	0
37	DTMF 3rd character	51	73	Special dial tn max off	0
* indicates that the default varies.					

Table 16. Parameter ID numbers (Spring, 2001 release) (continued)

ID#	Parameter name	Default	ID#	Parameter name	Default
74	Special dl tn dt thresh	*0	112	Tone transmit level	*100
75	Special dial tone freq1	*0	113	Data transmit level	*100
76	Special dial tone freq2	0	114	V17 14400 eqm thresh	48
77	Special dial tone freq3	0	115	V17 12000 eqm thresh	128
78	Special dl tn fq1 band	*0	116	V17 9600 eqm thresh	440
79	Special dl tn fq2 band	0	117	V17 7200 eqm thresh	1024
80	Special dl tn fq3 band	0	118	V33 14400 eqm thresh	65535
81	Tone/pulse	0	119	V33 12000 eqm thresh	65535
82	Pre-shunt	*0	120	V29 9600 eqm thresh	900
83	Post-shunt	*0	121	V29 7200 eqm thresh	1700
84	Pulse break	*60	122	V29 4800 eqm thresh	65535
85	Pulse make	*40	123	V27 4800 eqm thresh	2400
86	Pulse interdigit	*800	124	V27 2400 eqm thresh	5500
87	DTMF duration	*70	125	Echo protect	0
88	Open flash	*800	126	TCF 0 check	80
89	Phone inact abort	*59	127	No carrier abort	*10000
90	Busy tone detect	1	129	Modem equalizer	9011
91	Busy tone frequency	5	130	Receive loss	*30
92	Busy tone min on	*150	131	Transmit loss	*59
93	Busy tone max on	*750	132	DTMF high group	*240
94	Busy tone min off	*150	133	DTMF low group	*0
95	Busy tone max off	*750	134	Carrier detect level	*0
96	Complex impedance	*0	135	Tone transmit level	1
97	Busy tone freq 1	*620	136	Data transmit level	0
98	Busy tone freq 2	*480	137	V17 14400 eqm thresh	*60
99	Busy tn freq 1 band	*200	138	V17 12000 eqm thresh	300
100	Busy tn freq 2 band	*200	139	V17 9600 eqm thresh	1
101	Busy tn detect time	*10000	140	V17 7200 eqm thresh	*4
102	CED/busy threshold	*470	141	V33 14400 eqm thresh	*0
103	Eavesdrop gain	50	142	V33 12000 eqm thresh	*2
104	pulse dial disable	*0	143	V29 9600 eqm thresh	*1
106	Modem equalizer	0	144	V29 7200 eqm thresh	*5000
107	Receive loss	*50	145	V29 4800 eqm thresh	*0
108	Transmit loss	*80	146	V27 4800 eqm thresh	*0
109	DTMF high group	*60	147	V27 2400 eqm thresh	*0
110	DTMF low group	*20	148	Echo protect	*0
111	Carrier detect level	*440	149	TCF 0 check	0
* indicates that the default varies.					

Table 16. Parameter ID numbers (Spring, 2001 release) (continued)

ID#	Parameter name	Default	ID#	Parameter name	Default
150	No carrier abort	255	176	Contrast	0
151	Modem equalizer	2	178	Resolution	1
152	Receive loss	2	179	Number of speed dials	100
153	Transmit loss	26	180	Fax additional wait	0
154	DTMF high group	1	181	Compression factor	0
155	DTMF low group	0	182	Doc memory size	1412
156	Carrier detect level	256	183	Auto fax log	1
157	Tone transmit level	2	184	Fax fixed reduction	100
158	Data transmit level	2	185	Fax auto reduction	1
159	V17 14400 eqm thresh	26	186	Fax mem-out red	90
160	V17 12000 eqm thresh	1	187	Fax max auto red	60
161	V17 9600 eqm thresh	0	188	Fax backup receipt	1
162	V17 7200 eqm thresh	0	189	Transmit fail – non-jpeg	1
163	V33 14400 eqm thresh	0	190	Transmit fail – noncolor	0
164	V33 12000 eqm thresh	500	191	T.30 transmit color	0
165	Receive ecm abort	180	192	T.30 receive color	1
166	Receive non-ecm abrt	13	193	CIOCA default	12
167	Receive rtn thresh	10	194	CIOCA eavesdrop	4
168	Send ecm abort	300	195	CIOCB default us	44828
169	Send non-ecm abort	300	196	CIOCB eavesdrop us	44830
170	Ring noise enable	2	197	CIOCB default euro	44830
171	Key beep enable	2	198	CIOCB eavesdrop euro	44830
172	Monitor	0	199	CIOCB default row	44830
173	Ring volume	1	200	CIOCB eavesdrop row	44830
174	Beep volume	1	201	Fax_rx_disposition	1
175	Monitor volume	96	201	Receive ecm abort	0

Diagnostic mode

Use diagnostic mode to check the functionality of LEDs, the control panel display LCDs, and to check the firmware version.

Note

Diagnostic mode is available for firmware version 2.2 or higher.

To gain access to diagnostic mode

- 1 Unplug (or turn off) the product from the power source.
- 2 Press and hold down **VOLUME**, **STOP/CLEAR**, and **1** on the one-touch keypad simultaneously.
- 3 Continue to hold down the keys while you plug back in (or turn on) the product, through the entire power-on sequence.

The table below shows the tests and key sequences to perform in diagnostic mode:

Table 17. Diagnostic mode key sequences

To perform this test . . .	Press these keys . . .
Toggle LED1 on/off	1 or 5 on the one-touch keypad
Toggle LED2 on/off	2 or 6 on the one-touch keypad
Access LCD pattern 1 (solid fill)	1 on the numeric keypad, < , or >
Access LCD pattern 2 (empty fill)	2 or 8 on the numeric keypad
Access LCD pattern 3 (> fill)	3 or 9 on the numeric keypad, or REDUCE/ENLARGE
Access LCD pattern 4 (H fill)	4 on the numeric keypad or 3 or 7 on the one-touch keypad
Access LCD pattern 5 (frame fill)	5 or 0 on the numeric keypad, or RESOLUTION
Access LCD pattern 6 (check fill)	6 on the numeric keypad
Access LCD pattern 7 (ROM check)	7 on the numeric keypad or REDIAL/PAUSE
Access firmware version number	# , * , or 10 on the one-touch keypad

To check keys in diagnostic mode

- 1 Press **9** on the one-touch keypad.
- 2 Press all of the keys on the control panel.
- 3 Press an extra key.

For each key pressed during the test, a "+" character appears on the LCD (initially, five "+" characters appear on the screen to account for the 9 on the one-touch keypad and for four other spaces that have no key correspondence).

When all of the keys have been pressed, the display fills with "+" characters. Pressing any other key after the display is full results in the message "OK" on the control panel display also causes both LEDs to toggle on and off.

To exit diagnostic mode

- 1 Press **VOLUME**, **ENTER/MENU**, and **1** on the one-touch keypad simultaneously.
- 2 Release the keys.

NVRAM init

NVRAM init sets all default variables stored in NVRAM back to factory default values or to a default ROM value, depending on the variable, and performs a system reset.

CAUTION

Performing NVRAM init can cause the product to violate local telephone regulations. Reset the language and country code after performing NVRAM init.

NVRAM init resets the following:

- All menu settings to factory default values, including fax header and company name
- Factory settings such as formatter number, page counts, and factory paper settings
- Fax memory—all faxes in memory are erased
- All localization settings, including language and country code

To perform NVRAM init

- 1 Unplug (or turn off) the product from the power source.
- 2 Press and hold down the **SYMBOLS** key and **ENTER/MENU**.
- 3 Continue to hold down the keys while you plug back in (or turn on) the product, through the entire power on sequence.
- 4 When the control panel display reads `PERMANENT STORAGE INITIALIZE` or `HP LASERJET 3200`, release the keys.
- 5 Allow the product to return to `READY` before using the product.

PJL software commands

To set the following NVRAM variables:

Factory printer `DEFAULT PAPER`, scanner factory default paper size will be set to the same value automatically.

Factory printer `DEFAULT LPARM:PCL SYMSET`

Factory `DEFAULT OEM bit`

Factory `DEFAULT PRINTPAGECOUNT`

Factory `DEFAULT SCANPAGECOUNT`

Factory `DEFAULT COPYPAGECOUNT`

Note

Default quick copy paper size is also stored in scanner NVRAM but is changed only through the software or when set back to factory default with a NVRAMINIT. Only quick copy image type and contrast have a default value stored in NVRAM; they can only be changed through the software or by NVRAMINIT, which returns them to a ROM default value.

The table below provides a more detailed description of the NVRAM PjL factory variables and commands and shows possible settings for each.

NVRAM PjL Variable or Command	Possible settings
DEFAULT PAPER	"LETTER", "LEGAL", "A4", "EXECUTIVE", "COM10", "MONARCH", "DL", "C5", "B5", "CUSTOM"
DEFAULT LPARM:PCL SYMSET	"ROMAN8", "ISOL1", "ISOL2", "ISOL5", "PC8", "PC8DN", "PC850", "PC852", "PC8TK", "WINL1", "WINL2", "WINL5", "DESKTOP", "PSTEXT", "VNINTL", "VNUS", "MSPUBL", "MATH8", "PSMATH", "VNMATH", "PIFONT", "LEGAL", "ISO4", "ISO6", "ISO11", "ISO15", "ISO17", "ISO21", "ISO60", "ISO69", "WIN30"
DEFAULT OEM	"ON", "OFF"
DEFAULT PRINTPAGECOUNT	0-2147483647
DEFAULT SCANPAGECOUNT	0-2147483647
DEFAULT COPYPAGECOUNT	0-2147483647
CLEARNVRAM	None - Command
NVRAMINIT	None - Command

Figure 75. NVRAM PjL factory variables

To use these commands, you need some method to send PJJ commands to the printer, either with a software tool or by copying a binary file that contains the commands from the host using a DOS box. For example, from the DOS prompt:

```
copy /b filename lpt1
```

Here is an example of a file that uses one of the commands:

```
ESC%-12345X@PJJ SET SERVICEMODE=HPBOISEID  
@PJJ 'command'  
@PJJ RESET
```

Here is an example of using the NVRAMINIT command:

```
ESC%-12345X@PJJ SET SERVICEMODE=HPBOISEID  
@PJJ NVRAMINIT  
@PJJ RESET
```

Note

Set SERVICEMODE before trying to set the variable or you will not get the desired result. Also reset the PJJ to be sure the SERVICEMODE status is cleared.

To create these files, you need an editor that can insert the ESC character or is able to copy it in from an existing file. If a software tool is used, simply send the same strings in the same order as given for the example files.