

OKIDATA®

FUNCTION # LOCK- LAP TOP F. C. NUMBER
KEY PAD

714
612

Microline 184 Turbo
Printer Handbook

If they want to run Parallel.
• make sure there is no Serial Board
Installed.

• Now to remove Serial Board from
printer.

#1. In front of printer lift off access cover

#2 On either side there will be (2) deep set
screws - remove them & take off the
plate knob.

#3 Lift off printer cover.

#4. Unscrew the (2) screws holding the
Serial Board in place.

#5 Put everything back.

SB12
Jumper
A-15B
B - Microline.
chip
08/801

STD 73108/701

Setting Up

Before Changing Dip Switches - Power Off.

Control Circuit Board Switches

Note

Factory default settings are printed in **bold italics**.*MAIN BOARD*Microline - *STD*

Language	Switches 1, 2, 3
<i>Unslashed 0</i>	<i>ON, OFF, OFF</i>
Slashed 0	OFF, OFF, OFF
British	OFF, ON, OFF
German	ON, ON, OFF
French	OFF, OFF, ON
<i>Unslashed 0</i>	<i>ON, OFF, ON</i>
French Canadian	OFF, ON, ON
Spanish	ON, ON, ON
Form Length	Switches 4, 5
<i>11"</i>	<i>OFF, ON</i>
5 1/2"	OFF, OFF
8 1/2"	ON, OFF
14"	ON, ON
Auto Line Feed	Switch 6
<i>Auto LF OFF</i>	<i>OFF</i>
Auto LF ON	ON -
Data Bits	Switch 7
<i>8 bits</i>	<i>ON</i>
7 bits	OFF
Front Panel	Switch 8
<i>Enable</i>	<i>OFF</i>
Disable	ON

*CAN CAUSE
Double Spacing**Switch to Off
for Phone
ALARM system*

The main Board is below the Serial Board

Setting Up

IBM Graphics Printer

- main Board

Language Unslashed 0 Slashed 0 French Canadian Spanish	Switches 1, 2 OFF, ON OFF, OFF ON, OFF ON, ON
Auto Line Feed Auto LF OFF Auto LF ON	Switch 3 OFF ON
Form Length 11" 5 1/2" 8 1/2" 14"	Switches 4, 5 ON, OFF OFF, OFF OFF, ON ON, ON
Skip Over Perforation Skip over perf OFF Skip over perf ON	Switch 6 OFF ON
IBM Character Set Character Set I Character Set II	Switch 7 OFF ON
Front Panel Enable Disable	Switch 8 OFF ON

Super Speed Serial Board Switches

Note

Factory default settings are printed in ***bold italics***.

Switch Bank 1

Parity Type <i>Odd parity</i> Even parity	Switch 1 <i>ON</i> OFF
Parity <i>No parity</i> With parity	Switch 2 <i>ON</i> OFF
Data Bits <i>8 bits</i> 7 bits	Switch 3 <i>ON</i> OFF
Protocol <i>Ready/Busy</i> X-ON/X-OFF	Switch 4 <i>ON</i> OFF
Test Select <i>Circuit</i> Monitor	Switch 5 <i>ON</i> OFF
Mode Select <i>Print mode</i> Test mode	Switch 6 <i>ON</i> OFF
Busy Line Selection <i>SSD— Pin 11</i> SSD+ Pin 11 DTR— Pin 20 RTS— Pin 4	Switches 7, 8 <i>OFF, ON</i> OFF, OFF <i>ON, ON</i> ON, OFF

Telephone + Alarm 34

Telephone + Alarm

Switch Bank 2

Transmission Speed

19,200 bps

9,600 bps

4,800 bps

2,400 bps

1,200 bps

600 bps

300 bps

110 bps

DSR Input Signal

Active

Inactive

Buffer Threshold

32 bytes

256 bytes

Busy Signal Timing

200 ms min.

1 second min.

DTR Signal

**Space after power
on**

Space when printer
selected

Switches 1, 2, 3

ON, ON, ON

OFF, ON, ON

ON, OFF, ON

OFF, OFF, ON

ON, ON, OFF

OFF, ON, OFF

ON, OFF, OFF

OFF, OFF, OFF

Switch 4

ON

OFF

Switch 5

ON

OFF

Switch 6

ON

OFF

Switch 7

ON

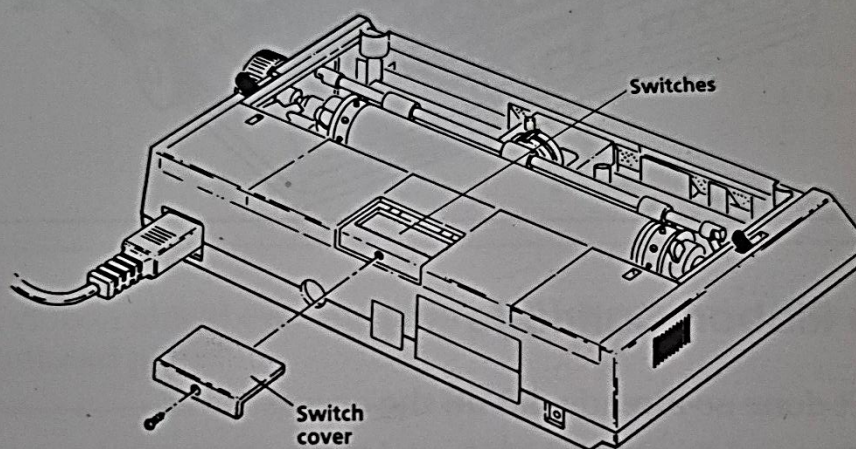
OFF

Switch 8: Not used

Resetting the Switches

You'll need a screwdriver and a fine-tipped tool – a ballpoint pen or toothpick will do.

1. Make sure the printer is off.
2. Remove the screw from the small cover on the back of the printer and slide off the cover.



3. Using the tool, slide the switch to the new selection.
4. Replace the cover and tighten the screw. When you turn on the printer, it will activate your new selections.

Installing the Paper Separator

1. Holding the paper separator parallel to the top of the printer, insert the separator into the slots on the top of the printer.



Telephone Switch Hook Up for the ML-320/1 Turbo

Product: ML320Turbo, ML321Turbo
Document Number: 2771
Date last Updated: 01/19/2001

Document Visibility:
☒ Business Partners
☒ End Users
☒ OKI Corporate
☒ Support Vendors

End User Communication

Statement:
To hook up to a Phone/Call System - with **Serial** Connection

Additional Info:
In menu of the printer make the following changes.
Select the ML emulation,
Under Set Up: select 7 bits, DATA WORD

Serial I/f : Change Parity to No Parity
Serial Data to 8
Protocol to Xon/Xoff
Busy Line to DTR
DSR Signal to Invalid
Baud Rate change according to your system. (9600 is default)

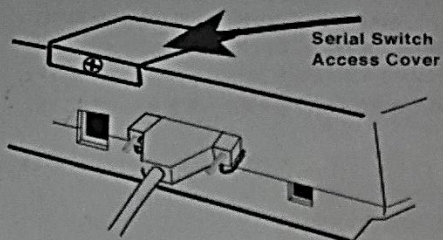
Int EU General

General	General
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Main Board - off
0
0
0
on
off
on
off
Data Bits
off 7

SW1
on
↓

SW2
off
on
on
on
off
on
on
off



Note: The factory default for each parameter is in **bold italics**.

Switch Bank 1 (SW1)

Parity Type <i>Odd parity</i> Even parity	Switch 1 <i>ON</i> OFF
Parity <i>No parity</i> With parity	Switch 2 <i>ON</i> OFF
Data Bits <i>8 Bits</i> 7 Bits	Switch 3 <i>ON</i> OFF
Protocol <i>Ready/Busy</i> X-ON, X-OFF	Switch 4 <i>ON</i> OFF
Test Select <i>Circuit</i> Monitor	Switch 5 <i>ON</i> OFF
Mode Select <i>Print mode</i> Test mode	Switch 6 <i>ON</i> OFF
Busy Line Selection <i>SSD- Pin 11</i> SSD+ Pin 11 DTR- Pin 20 RTS- Pin 4	Switch 7, 8 <i>OFF, ON</i> OFF, OFF ON, ON ON, OFF

Switch Bank 2 (SW2)

Transmission Speed 19,200 bps <i>9,600 bps</i> 4,800 bps 2,400 bps 1,200 bps	Switches 1, 2, 3 <i>ON, ON, ON</i> OFF, ON, ON ON, OFF, ON OFF, OFF, ON ON, ON, OFF OFF, ON, OFF ON, OFF, OFF OFF, OFF, OFF
DSR Input Signal <i>Active</i> Inactive	Switch 4 <i>ON</i> OFF
Buffer Threshold <i>32 bytes</i> 256 bytes	Switch 5 <i>ON</i> OFF
Busy Signal Timing <i>200 ms minimum</i> 1 second minimum	Switch 6 <i>ON</i> OFF
DTR Signal <i>Space after power on</i> Space when printer is selected	Switch 7 <i>ON</i> OFF
Not Used	Switch 8

Additional Info:

When the Serial Interface Board (RS-232C) is installed the Parallel port will be disabled. For additional information regarding the ports refer to OkiDoc # 3389

EU - Publications Update - INT

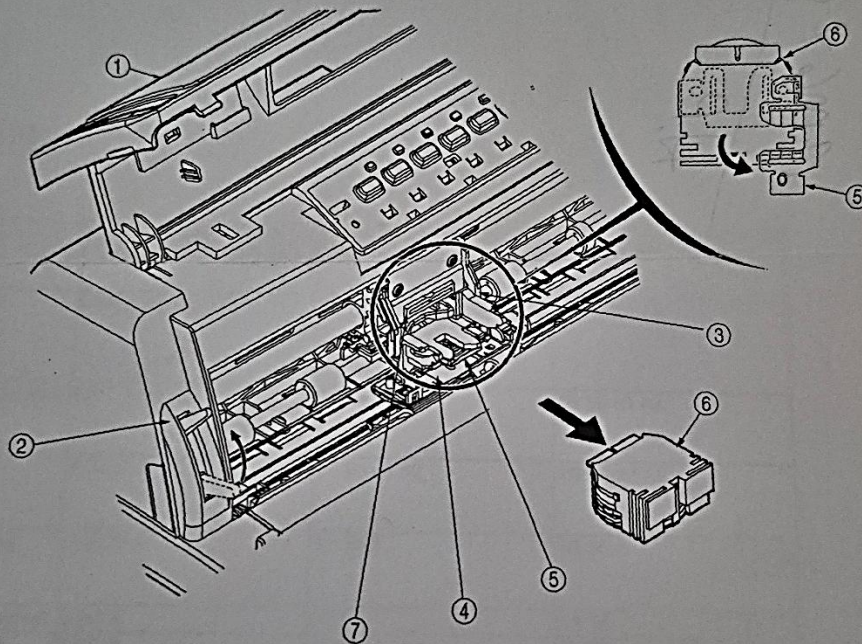
Category	Document Type	URL
Product Usage	Publications Update	

5.2.2 Print head

- (1) Open the access cover ①.
- (2) Move the adjust lever ② to the top.
- (3) Move the carriage unit ③ to the mid-section of the upper sheet guide ④ notch.
- (4) Pull the head clamp ⑤ toward the front and remove the print head ⑥ by pulling it out toward the front.
- (5) Reinstall in the opposite sequence to removal.

(Precautions upon reinstalling)

1. Press the print head ⑥ against the carriage unit ③ and insert it in the connector ⑦.
2. The head clamp ⑤ must be set securely in the print head ⑥ and carriage unit ③.



631-433-4185

Ken
Seaton

refurbished
p/n 55112258
new
42124208

Common problems & solutions for serial interfacing

1. NO COMMUNICATION

a. MAKE SURE CUSTOMER WANTS TO RUN SERIAL, NOT PARALLEL.

Remember with the 100 series printers, the serial board needs to be removed if running parallel. Also, if the customer just purchased the printer, and he is a home user, chances are he wants to run parallel. If the printer is the 290 series, however, they need to change the PERSONALITY MODULE for either parallel/serial. Suggest parallel whenever possible...it's easier!

b. CABLE CONFIGURED WRONG. Find out if the customer is using a straight-thru or a null-modem cable. If he's unsure, then ask if this is a new installation, or has this OKI printer replaced another printer? If it's a new installation, then the cable may be wrong, however the configuration of the printer or their system may be the problem. If this printer replaced another, then the printer's configuration or a bad serial card could be the problem.

c. BAUD RATE. Sometimes, if the system is set for, say, 9600 baud and the printer is set for ONE setting (either up or down) off, (in this case, 4800 baud) then the printer will not print, or you may get garbage.

d. HEX-DUMP IT! Regardless of how the menu or switch settings are set, the printer should print in hex mode. Have customer hold down "form feed" & "select" on power up until "hex mode" prints. (the earlier 100,200, & 300 series printers are only select.) Then have customer send data to printer just as if it were printing normally. If the printer starts to print, then you have established communication, and the PRINTER'S configuration is wrong or not evenly matched with the computer system. If there is no communication, then the problem is with the SYSTEM or as above, their cable is incorrect.

e. DSR LINE. If the customer states that another printer worked at this location, and not the OKI printer, then change the printers' DSR line from valid(factory set) to invalid. This may allow the data to flow thru; even if it's garbage, you know you have communication and you can work from there.

PRINTER PRINTS, BUT ONLY GARBAGE

a. WHAT KIND OF GARBAGE? If the printer prints *immediate* garbage, (the characters printed are graphic data or make no sense) then the problem is either baud rate or emulation. Make sure the system's and printer's baud rate match. If both the system and printer are set correctly, then try changing the switches/menu to a

different baud rate but inform the customer to leave the system the same. If you still have the same problem, then continue on with different changes in baud rate to see if that helps. Also, the printer may be in Epson mode and you need to be in IBMPPR or vice-versa.

b. MY PRINTER ONLY PRINTS XXXXX's and OOOOO's. This is a classic baud rate problem. Once again, as before, have the customer leave the system the same but change the printers' baud rate. Sometimes with network systems, the system is set to 9600 baud and the printer needs to be set to 2400..and it works!

c. MY PRINTER ONLY PRINTS @@@@. This is a "parity" error. The system is set for odd, even, or none and the printer is set for something else. Make sure these match correctly.

d. MY PRINTER ONLY PRINTS ~~~~~. This is a "framing" error. The system is set for 7 or 8 bit data and the printer is set for something else. Make sure these match correctly.

MY PRINTER PRINTS FINE FOR A WHILE THEN GOES TO GARBAGE.

a. PROTOCOL. The system is using xon/xoff and the printer is set to ready/busy. Most IBM systems use ready/busy while network and phone systems use xon/xoff.

b. HANDSHAKING. If the customer does not have a clue about his cable configuration and he is using an IBM, then you may need to "guesstimate" with him. First, make sure the printer is set for ready/busy. Then, change the busy line in the printer from SSD- (pin 11) to DTR (pin 20). If the customer still has a problem after a few pages, then he may be running xon/xoff. Change the printers' protocol to this but if they still have a problem, then give them the serial pin outs for the printer and send them back to the computer manufacturer for assistance.

MY 184 TURBO PRINTS ABOUT ONE PAGE OF GOOD DATA BEFORE GOING TO GARBAGE AND MY 320 PRINTS ABOUT 11 PAGES BEFORE GOING TO GARBAGE. THEY'RE BOTH USING THE SAME CABLE, AND BOTH PRINTERS HAVE THE SAME PIN ASSIGNMENTS...WHAT'S THE PROBLEM?

BUFFERING! Keep in mind that the 184Turbo has a 2K buffer and the 320 has a 23K buffer. If we look at each page of data as "approximately" 2K, then this is the amount of data the printer can hold in its buffer before sending back a signal to the computer to "stop sending data, my buffer is full". Most of our printers give you the option in the menu to set your "MAX RECEIVE BUFFER" to either full, one line, 8K (4 pages), 23K (11 pages) or higher.

184 - 2K = 1Pg
320 - 23K = 10 1/11 pages

check
also
hand shaking

Standard ASCII

Dec	Hex	Char	Dec	Hex	Char	Dec	Hex	Char	Dec	Hex	Char
0	00	Null	32	20	Space	64	40	@	96	60	`
1	01	Start of heading	33	21	!	65	41	A	97	61	a
2	02	Start of text	34	22	"	66	42	B	98	62	b
3	03	End of text	35	23	#	67	43	C	99	63	c
4	04	End of transmit	36	24	\$	68	44	D	100	64	d
5	05	Enquiry	37	25	%	69	45	E	101	65	e
6	06	Acknowledge	38	26	&	70	46	F	102	66	f
7	07	Audible bell	39	27	'	71	47	G	103	67	g
8	08	Backspace	40	28	(	72	48	H	104	68	h
9	09	Horizontal tab	41	29	)	73	49	I	105	69	i
10	0A	Line feed	42	2A	*	74	4A	J	106	6A	j
11	0B	Vertical tab	43	2B	+	75	4B	K	107	6B	k
12	0C	Form feed	44	2C	,	76	4C	L	108	6C	l
13	0D	Carriage return	45	2D	-	77	4D	M	109	6D	m
14	0E	Shift out	46	2E	.	78	4E	N	110	6E	n
15	0F	Shift in	47	2F	/	79	4F	O	111	6F	o
16	10	Data link escape	48	30	0	80	50	P	112	70	p
17	11	Device control 1	49	31	1	81	51	Q	113	71	q
18	12	Device control 2	50	32	2	82	52	R	114	72	r
19	13	Device control 3	51	33	3	83	53	S	115	73	s
20	14	Device control 4	52	34	4	84	54	T	116	74	t
21	15	Neg. acknowledge	53	35	5	85	55	U	117	75	u
22	16	Synchronous idle	54	36	6	86	56	V	118	76	v
23	17	End trans. block	55	37	7	87	57	W	119	77	w
24	18	Cancel	56	38	8	88	58	X	120	78	x
25	19	End of medium	57	39	9	89	59	Y	121	79	y
26	1A	Substitution	58	3A	:	90	5A	Z	122	7A	z
27	1B	Escape	59	3B	;	91	5B	[	123	7B	{
28	1C	File separator	60	3C	<	92	5C	\	124	7C	
29	1D	Group separator	61	3D	=	93	5D	]	125	7D	}
30	1E	Record separator	62	3E	>	94	5E	^	126	7E	~
31	1F	Unit separator	63	3F	?	95	5F	_	127	7F	□

Extended ASCII

Dec	Hex	Char	Dec	Hex	Char	Dec	Hex	Char	Dec	Hex	Char
128	80	Ç	160	A0	á	192	C0	Ł	224	E0	α
129	81	ù	161	A1	í	193	C1	ł	225	E1	β
130	82	é	162	A2	ó	194	C2	ŧ	226	E2	Γ
131	83	â	163	A3	ú	195	C3	†	227	E3	Π
132	84	ä	164	A4	ñ	196	C4	—	228	E4	Σ
133	85	à	165	A5	Ñ	197	C5	‡	229	E5	σ
134	86	å	166	A6	ª	198	C6	ƒ	230	E6	μ
135	87	ç	167	A7	º	199	C7	‡	231	E7	ι
136	88	ê	168	A8	¿	200	C8	ℓ	232	E8	Φ
137	89	ë	169	A9	ƒ	201	C9	℥	233	E9	Θ
138	8A	è	170	AA	¬	202	CA	℥	234	EA	Ω
139	8B	ï	171	AB	½	203	CB	ƒ	235	EB	ϛ
140	8C	î	172	AC	¼	204	CC	‡	236	EC	∞
141	8D	ì	173	AD	ı	205	CD	=	237	ED	ϛ
142	8E	Ä	174	AE	«	206	CE	‡	238	EE	ε
143	8F	Å	175	AF	»	207	CF	±	239	EF	Π
144	90	É	176	B0	☐	208	DO	℥	240	FO	≡
145	91	æ	177	B1	☐	209	D1	ƒ	241	F1	±
146	92	Æ	178	B2	☐	210	D2	π	242	F2	≥
147	93	ô	179	B3		211	D3	ℓ	243	F3	≤
148	94	ö	180	B4	†	212	D4	ℓ	244	F4	[
149	95	ò	181	B5	‡	213	D5	ƒ	245	F5	]
150	96	û	182	B6	‡	214	D6	π	246	F6	÷
151	97	ù	183	B7	π	215	D7	‡	247	F7	≈
152	98	ÿ	184	B8	‡	216	D8	‡	248	F8	•
153	99	Ö	185	B9	‡	217	D9	ƒ	249	F9	•
154	9A	Ü	186	BA		218	DA	ƒ	250	FA	•
155	9B	•	187	BB	π	219	DB	■	251	FB	√
156	9C	£	188	BC	℥	220	DC	■	252	FC	•
157	9D	¥	189	BD	℥	221	DD	■	253	FD	•
158	9E	℔	190	BE	ƒ	222	DE	■	254	FE	■
159	9F	f	191	BF	ƒ	223	DF	■	255	FF	□