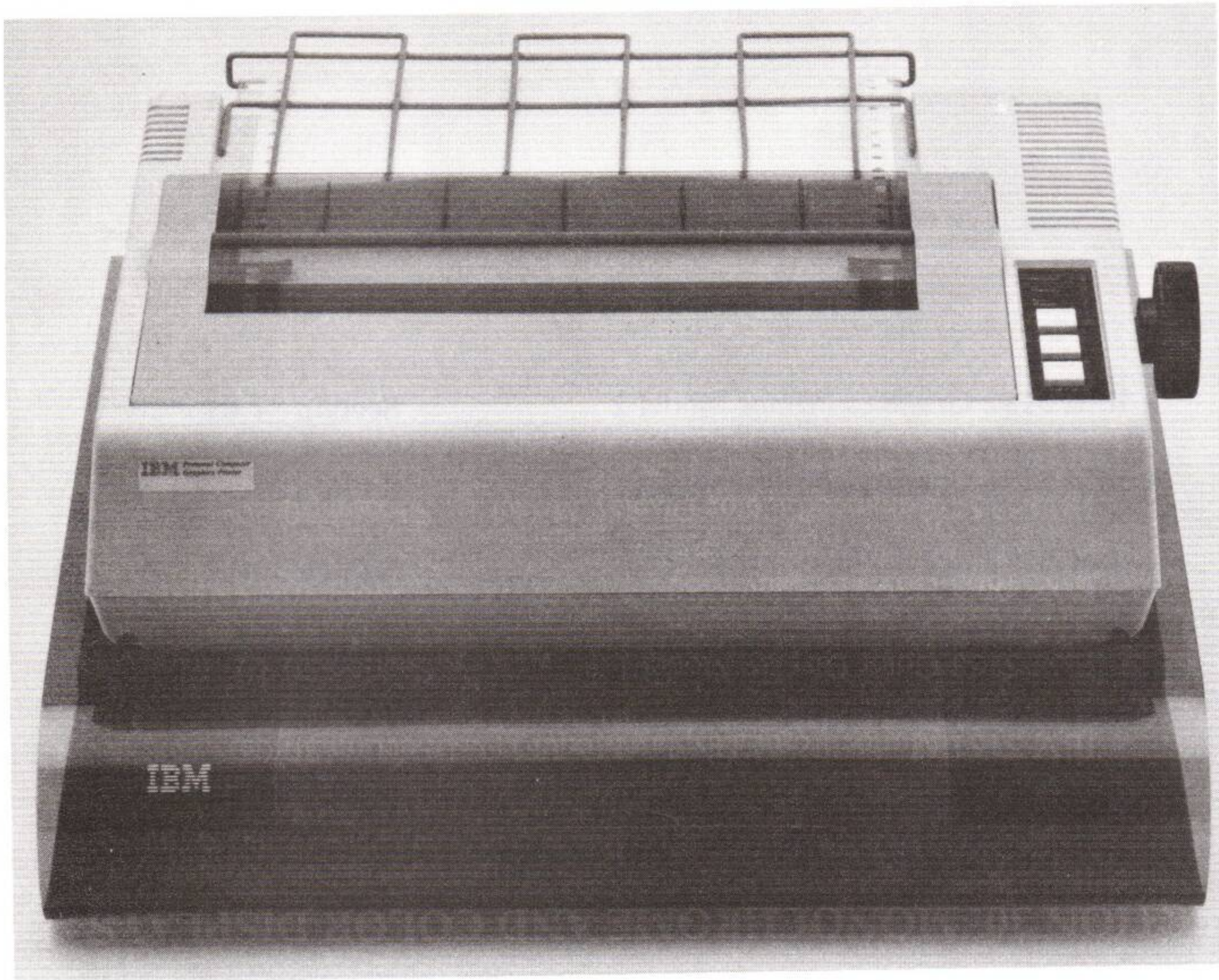


31:05 IBM 5152 Graphics Printer Model 2



Hardware Description

The 5152 Graphics Printer Model 2 is a quality, dot matrix, impact, tabletop printer that can print graphic images as well as text characters on continuous single-part or multiple-part forms. It can be attached to the following:

- 4860 PCjr via the Parallel Printer Attachment
- 5150 Personal Computer via the Monochrome Display and Printer Adapter or the Printer Adapter
- 5155 Portable Personal Computer via the Printer Adapter
- 5160 Personal Computer XT or XT/370 via the Monochrome Display and Printer Adapter or the Printer Adapter
- 5170 Personal Computer AT or AT/370 via the Monochrome Display and Printer Adapter or the Serial/Parallel Adapter (parallel port)
- 3270 Personal Computer (3270-PC) via the Printer Adapter or Printer/Memory Adapter
- 3270 Personal Computer/Graphics and 3270 Personal Computer/Extended Graphics (3270-PC/G and GX) workstations via the Printer Adapter or Printer/Memory Adapter

The 5152 Model 2 printer has the following characteristics:

- Bidirectional printing (prints one line left to right and the next right to left, etc.)
- 80 characters per second nominal print speed
- Line buffer for performance
- 12 character styles
- Character font: 9 × 9 dot matrix

- Normal, compressed, emphasized, double-strike, subscript, superscript, double-width, and underline modes provided. Modes can be combined as shown below – those in the same column – (see examples in Figure 31-1):

Printer Modes	Combinations Supported			
Normal	X	X	X	
Compressed			X	X X
Emphasized				X X X
Double-strike	X		X	X
Subscript	X		X	X
Superscript		X		X
Double-width	X	X X	X X X	X X X
Underline	X	X X	X X X	X X X

- Four print sizes: 5 characters per inch to 17.1 characters per inch
- Characters per line:
 - 80 (normal size), 10 characters per inch
 - 40 (double width size), 5 characters per inch
 - 132 (compressed size), 17.1 characters per inch
 - 66 (compressed double width size), 8.25 characters per inch
 - 80 (subscript), 10 characters per inch
 - 80 (superscript), 10 characters per inch
- Normal print size (for 80 characters per line):
 - .08 inches (2.1 mm) wide
 - .12 inches (3.2 mm) high
- Two character sets (shown in Figures 31-2 and 31-3) consisting of:
 - 96 standard ASCII characters (includes uppercase and lowercase)
 - Graphics characters (64)
 - European characters
 - Greek characters
 - Mathematical and various symbols
- Variable form length
- Skip to top of next page (manual or programmed)
- Horizontal tab stops controlled by programming
- Warning beep when out of forms or when activated from the system unit
- Printer self-test that does not require the system unit. (When the form feed and line feed push-buttons are held down and then the printer is powered on, rows of characters are printed continuously to test the operation of the printer. The printer must be offline to the system unit.)
- Replaceable print head
- Replaceable black ribbon cartridge good for 3 million characters (or about 10.4 hours of nonstop use)
- Adjustable pinfeed tractors for paper feed
- Continuous-form paper
- Paper width: 4 inches (101.6 mm) to 10 inches (254 mm)

- Copies: One original with two carbon copies
- Paper thickness: .012 inch (.3 mm) maximum including copies, .0025 inch (.064 mm) minimum
- Line spacing: 6 lines per inch or programmable
- Dimensions:
 - Width: 15.7 inches (400 mm)
 - Depth: 12 inches (305 mm)
 - Height: 4.2 inches (107 mm)
- Weight: Approximately 12 lb (5.5 kg)
- Electrical: 120 volts AC, 60 Hz (a 220- and a 240-volt model are also available for 50/60 Hz)
- Environmental requirements:
 - 41 to 95 degrees F (5 to 35 C)
 - 10% to 80% humidity (noncondensing)

Two DIP (dual inline package) switches are located within the 5152 unit (on the control circuit board). These switches control several functions, such as the character set to be used, form length, line spacing, and warning buzzer on or off. The switches are set to defaults at the factory (character set 1, 11-inch form length, 6 lines per inch, and error buzzer on, for example). Default settings can be changed during execution of a program using printer control codes. For a description of DIP switch functions and default settings and the printer control codes for the 5152 printer, see the *Options and Adapters Technical Reference* manual (6322509). Printer control codes are also given in the *Guide to Operations* manual that is supplied with the configuration.

The 5152 printer can be placed on top of the system unit or 5161 unit. Alternatively, the optional Printer Stand feature (shown on page 31-2) can be purchased for the 5152. It supports the 5152 printer and provides space-saving storage for fanfold paper below the printer. The stand can also be placed on the system unit or 5161 unit.

The 5152 Printer Model 2 is a customer-setup unit. The optional Printer Cable feature, which provides a six-foot (1.8-meter) signal cable, must be purchased to attach the 5152 to the back of the system unit in the configuration or to the 5161 Expansion Unit. The 5152 has a six-foot (1.8-meter) power cable and requires its own power source.

Operating Systems Supporting

The 5152 Model 2 is supported by the following IBM-logo operating systems and control programs:

- IBM Personal Computer DOS (all versions)
- IBM Personal Computer/Interactive Executive (PC/IX)
- IBM PC XENIX™ System

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- CP/M-86™
- UCSD p-System™
- VM/PC
- 3270-PC Control Program
- 3270-PC Graphics Control Program

Warranty Period

The warranty period is three months and the warranty service is Customer Carry-In Exchange.

IBM Service Offerings

The following IBM service offerings are available:

- IBM Maintenance Agreement and Amendment for IBM Service/Exchange Center Services:
 - Warranty Options:
 - IBM On-Site Exchange
 - Customer On-Site Exchange
 - Annual Maintenance:
 - IBM On-Site Exchange
 - Customer On-Site Exchange
 - Customer Carry-In Exchange
 - Customer Carry-In Repair
- IBM Hourly Service: Customer Carry-In Repair at an IBM Service/Exchange Center
- Self-service using the Hardware Maintenance and Service package (a purchased item), which enables the customer to isolate the problem to an under-the-cover field replaceable unit

STANDARD DOT MATRIX PRINT

COMPRESSED

COMPRESSED, DOUBLE STRIKE

COMPRESSED, DOUBLE WIDTH

COMPRESSED, DOUBLE STRIKE, DOUBLE WIDTH

EMPHASIZED

EMPHASIZED, DOUBLE STRIKE

EMPHASIZED, DOUBLE WIDTH

STANDARD, DOUBLE WIDTH

DOUBLE STRIKE, DOUBLE WIDTH

Figure 31-1. Examples of 5152 printing

Single Unit Prices

Item/Part Number/Feature Code	Single Unit Purchase Price (\$)
5152 Graphics Printer Model 2 (5152002)	449
Printer Cable (1525612) (5612)	45
Printer Stand (1525614) (5614)	45

Discounts Available

The 5152 and its hardware features may be eligible for one of the following discounts when purchased from an NAD or NMD branch office:

- Volume Procurement Amendment
- Educational Allowance
- Special Bid

Single Delivery Quantity and Quantity Purchase Plan discounts are available from IBM Product Centers.

0	1	2	3	4	5	6	7	8	9
NUL							BEL		HT
10	11	12	13	14	15	16	17	18	19
LF	VT	FF	CR	SO	SI			DC2	
20	21	22	23	24	25	26	27	28	29
DC4				CAN			ESC		
30	31	32	33	34	35	36	37	38	39
		SP	!	"	#	\$	%	&	'
40	41	42	43	44	45	46	47	48	49
(	)	*	+	,	-	.	/	0	1
50	51	52	53	54	55	56	57	58	59
2	3	4	5	6	7	8	9	:	;
60	61	62	63	64	65	66	67	68	69
<	=	>	?	∅	A	B	C	D	E
70	71	72	73	74	75	76	77	78	79
F	G	H	I	J	K	L	M	N	O
80	81	82	83	84	85	86	87	88	89
P	Q	R	S	T	U	V	W	X	Y
90	91	92	93	94	95	96	97	98	99
Z	[	\	\]	^	_	`	a	b	c
100	101	102	103	104	105	106	107	108	109
d	e	f	g	h	i	j	k	l	m
110	111	112	113	114	115	116	117	118	119
n	o	p	q	r	s	t	u	v	w
120	121	122	123	124	125	126	127	128	129
x	y	z	{	|	}	~		NUL	

130	131	132	133	134	135	136	137	138	139	
					BEL		HT	LF	VT	
140	141	142	143	144	145	146	147	148	149	
FF	CR	SO	SI			DC2		DC4		
150	151	152	153	154	155	156	157	158	159	
		CAN			ESC					
160	161	162	163	164	165	166	167	168	169	
á	í	ó	ú	ñ	Ñ	ä	ö	¿	⌂	
170	171	172	173	174	175	176	177	178	179	
⌂	½	¼	¡	«	»	▒	▒	▒	▒	
180	181	182	183	184	185	186	187	188	189	
⌂	⌂	⌂	⌂	⌂	⌂	⌂	⌂	⌂	⌂	
190	191	192	193	194	195	196	197	198	199	
⌂	⌂	⌂	⌂	⌂	⌂	⌂	⌂	⌂	⌂	
200	201	202	203	204	205	206	207	208	209	
⌂	⌂	⌂	⌂	⌂	⌂	⌂	⌂	⌂	⌂	
210	211	212	213	214	215	216	217	218	219	
⌂	⌂	⌂	⌂	⌂	⌂	⌂	⌂	⌂	⌂	
220	221	222	223	224	225	226	227	228	229	
▒	▒	▒	▒	▒	α	β	Γ	Π	Σ	σ
230	231	232	233	234	235	236	237	238	239	
μ	τ	ϕ	θ	Ω	δ	∞	∅	€	∩	
240	241	242	243	244	245	246	247	248	249	
≡	±	≥	≤	∫	J	÷	≈	°	■	
250	251	252	253	254	255					
-	√	n	2	■	SP					

Figure 31-2. Character Set 1 for the 5152 Graphics Printer

0	1	2	3	4	5	6	7	8	9
NUL			♥	♦	♣	♠	BEL		HT
10	11	12	13	14	15	16	17	18	19
LF	VT	FF	CR	SO	SI			DC2	
20	21	22	23	24	25	26	27	28	29
DC4	§			CAN			ESC		
30	31	32	33	34	35	36	37	38	39
		SP	!	”	#	\$	%	&	'
40	41	42	43	44	45	46	47	48	49
(	)	*	+	,	-	.	/	0	1
50	51	52	53	54	55	56	57	58	59
2	3	4	5	6	7	8	9	:	;
60	61	62	63	64	65	66	67	68	69
<	=	>	?	⊙	A	B	C	D	E
70	71	72	73	74	75	76	77	78	79
F	G	H	I	J	K	L	M	N	O
80	81	82	83	84	85	86	87	88	89
P	Q	R	S	T	U	V	W	X	Y
90	91	92	93	94	95	96	97	98	99
Z	[	\	\]	^	_	`	a	b	c
100	101	102	103	104	105	106	107	108	109
d	e	f	g	h	i	j	k	l	m
110	111	112	113	114	115	116	117	118	119
n	o	p	q	r	s	t	u	v	w
120	121	122	123	124	125	126	127	128	129
x	y	z	{	|	}	~		ç	ü

130	131	132	133	134	135	136	137	138	139
é	â	ä	à	å	ç	ê	ë	è	ï
140	141	142	143	144	145	146	147	148	149
î	ì	Ä	Å	É	æ	Æ	ô	ö	ò
150	151	152	153	154	155	156	157	158	159
û	ù	ÿ	ÿ	ü	ç	£	¥	₤	f
160	161	162	163	164	165	166	167	168	169
á	í	ó	ú	ñ	Ñ	à	ó	¿	⌂
170	171	172	173	174	175	176	177	178	179
⌂	½	¼	¡	«	»	■	■	■	■
180	181	182	183	184	185	186	187	188	189
⌂	⌂	⌂	⌂	⌂	⌂	⌂	⌂	⌂	⌂
190	191	192	193	194	195	196	197	198	199
⌂	⌂	⌂	⌂	⌂	⌂	⌂	⌂	⌂	⌂
200	201	202	203	204	205	206	207	208	209
⌂	⌂	⌂	⌂	⌂	⌂	⌂	⌂	⌂	⌂
210	211	212	213	214	215	216	217	218	219
⌂	⌂	⌂	⌂	⌂	⌂	⌂	⌂	⌂	⌂
220	221	222	223	224	225	226	227	228	229
■	■	■	■	α	β	Γ	Π	Σ	σ
230	231	232	233	234	235	236	237	238	239
μ	τ	ϕ	θ	Ω	δ	∞	∅	ε	∩
240	241	242	243	244	245	246	247	248	249
≡	±	≥	≤	∫	J	÷	≈	°	■
250	251	252	253	254	255				
-	√	n	²	■	SP				

Figure 31-3. Character Set 2 for the 5152 Graphics Printer