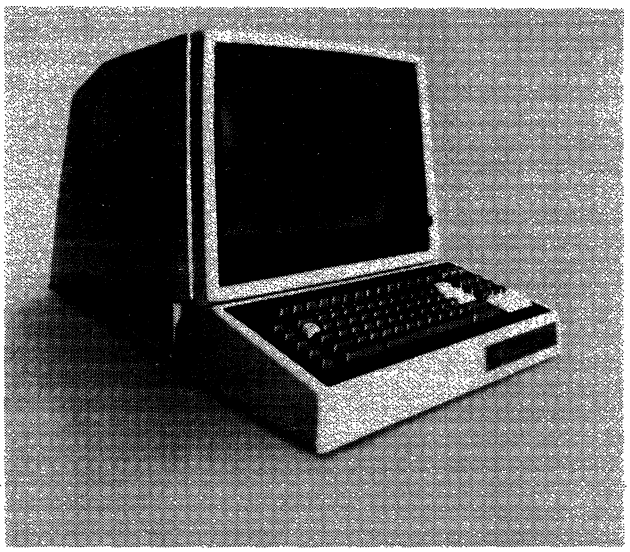
Genesis One IBM 3270 Replacement Display Stations and Printers



The Genesis One G77 Display Terminal and G Series Printers are interchangeable replacements for the IBM 3277 Model 2 Display Station and IBM 3284, 3286, and 3288 Printers, respectively.

The G77 includes standard and optional IBM 3277-2 features plus a few key enhancements. The G series printers offer print rates of 60, 88, 120, and 165 cps and 132 print positions.

Monthly savings of 20 to 32 percent can be realized on the rental cost, compared to the IBM 3277-2, under two through four year leases. For purchased units, a saving of 13 percent compared to IBM's price tag can be realized. Printers are priced up to 68 percent higher (under a two-year lease) than IBM's 40- and 66-cps buffered printers but are faster.

The G77 terminal was originally produced for Genesis One by Texas Scientific, who Genesis One acquired in February 1976.

MANAGEMENT SUMMARY

In November 1974, Genesis One addressed itself to the end-user market as a vendor of add-on or replacement CRT display stations and printers for the IBM 3270, 3790, and System/3 environments. The G77 Information Display Terminal and the G Series Printers, both billed as "The Plug", are plug-to-plug replacements for IBM's 1920-character 3277 Model 2 Display Stations and 328X printers. IBM 3270 users can expand their existing installations and/or replace existing IBM display stations and printers with the Genesis One displays and printers, which provide complete compatibility with their IBM counterparts. No hardware or software changes are required. What's more, existing IBM cables can be used to attach the G77 display stations and G Series Printers to the IBM controller. Cables are also available from Genesis One.

All current functions and capabilities of the IBM 3277-2 have been implemented in the G77. Genesis One has also added a few enhancements that give the G77 a slight edge over its IBM counterpart with respect to operating flexibility. One of the more significant enhancements (a no-cost option for applications such as text editing) is the capability to display true upper and lower case alphabetics.

Because the G77 displays each character via a 5-by-7 dot matrix, it is reasonable to assume that its character clarity and sharpness (resolution) is somewhat less than that of IBM 3270, which uses a 7-by-9 dot matrix to form each character. This deficiency was quite apparent in the original models of the G77, but Genesis One has since alleviated the problem (without changing the character matrix) by refining the character generator. The G77 terminal now includes a new character generator and monitor; according to Genesis One, its display clarity is equal to that of the IBM 3277.

CHARACTERISTICS

VENDOR: Genesis One Computer Corporation, a subsidiary of Management Assistance, Inc. (MAI), 300 East 44th Street, New York, N.Y. 10017. Telephone (212) 557-3500.

DATE OF ANNOUNCEMENT: November 1974.

DATE OF FIRST DELIVERY: January 1975.

NUMBER DELIVERED TO DATE: 2500.

SERVICED BY: Sorbus, Inc., another subsidiary of Management Assistance, Inc.

CONFIGURATION

The Genesis One G77 Information Display Terminal and G Series Printers are interchangeable replacements for the IBM 3277 Model 2 Display Station and IBM 3284, 3286, and 3288 Printers, respectively, on the IBM 3272 Model 2 Local Control Unit or the IBM 3271 Model 2 or 12 Remote Control Unit. The G77 display station can also replace IBM 3277-2 display stations on the IBM 3791 Control Unit (the controller for the IBM 3790 System) and on IBM System/3 computer models via the appropriate attachments.

TRANSMISSION SPECIFICATIONS

Applicable to the IBM 3271 Model 2 and 12 and IBM 3791 control units. See IBM 3270 Information Display System and IBM 3790 Communication System, Reports C25-491-101 and C21-491-101, respectively.

DEVICE CONTROL

The G77 terminal provides all the functions that are currently provided by the IBM 3277-2 Display Station, plus

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Genesis One offers five EBCDIC keyboards. Two 66-key data entry- and typewriter-style keyboards, a 78-key typewriter-style keyboard, and a 78-key console keyboard compare with IBM's EBCDIC data entry, typewriter, and console keyboards. An equivalent to the 78-key data entry keyboard offered by Genesis One is not available from IBM. Console arrangement, EBCDIC/APL, and ASCII keyboards are not offered by Genesis One. An optional numeric pad facilitates volume entry of numeric data.

Light pen and ID card reader, optional features for the IBM 3270, are also available from Genesis One.

The G Series Printers provide substantial increases in cost-performance over the IBM 40- and 66-cps printers. These printers, like the IBM printers, print up to 132 print positions and are equipped with 1920-character buffers.

USER REACTION

In Datapro's March 1977 survey of alphanumeric display terminal users, 23 users reported on their experience with 308 Genesis One G77 display stations. Their ratings are presented below.

	Excellent	Good	Fair	Poor	WA*
Overall performance	14	8	1	0	3.6
Ease of operation	17	6	0	0	3.7
Display clarity	9	12	2	0	3.3
Keyboard feel and usability	5	15	1	1	3.1
Hardware reliability	8	12	2	0	3.3
Maintenance service	10	9	1	1	3.3
Software & technical support	3	8	4	0	2.9

*Weighted Average on a scale of 4.0 for Excellent.

These users cited the key advantages of the G77 as low cost (22 responses), flexibility (5), reliability (12), applicapability (6), compact size (6), and strong vendor support (4).

Only one of the 23 users reported equipment unreliability; this user, however, rated reliability as good. Maintainability and poor support were cited as disadvantages by two and three users, respectively.

These ratings and overall complimentary remarks for the G77 and its vendor endorse the product as a cost-effective, reliable terminal that merits serious consideration by other prospective users.□

a few of its own. The added functions include a Home cursor control, an optional cursor blinking capability, Field Erase, Automatic Variable Initialization, and Character Repeat. The added Home key moves the cursor to the initial character position of the first unprotected field. When activated by the operator, the Automatic Variable Initialization function identifies variable fields by displaying a dot in each character position. The Character Repeat function permits any character to be repeatedly displayed.

The G77 is available with IBM-equivalent options. Extra-cost options include Security Lock, Audible Alarm, Light Pen, and ID Card Reader. The blinking cursor and numeric lock keyboard features are no-cost options.

COMPONENTS

DISPLAY STATION: The G77 is composed of a display unit and a separate keyboard. The CRT display screen measures 14 inches diagonally and displays 1920 characters arranged in 24 lines of 80 characters each. The display arrangement is identical with that of the IBM 3277-2.

A character set of 96 characters, including upper and lower case alphabetics, numerics, and special symbols (as compared with IBM's standard 64-character set), is displayed in green against a dark background, as in the IBM 3277-2. Unlike the IBM 3277-2, which forms each character via a 7-by-9 dot matrix, the G77 uses a 5-by-7 dot matrix.

The display unit measures 16½ inches wide by 15 inches high by 18.3 inches deep and weighs 57 pounds. Heat dissipation is 490 BTU/hr. By comparison, the IBM 3277 Model 2 measures 16 inches wide by 19 inches high by 21 inches deep and weighs 85 pounds. Its heat dissipation is 525 BTU/hr.

Five keyboards are available: a 66- or 78-key EBCDIC typewriter-style keyboard, a 66- or 78-key EBCDIC data entry keyboard, and a 78-key EBCDIC console keyboard. The 78-key keyboards include 12 Program Function keys; each of these keyboards is identical with its IBM counterpart. A 15-key numeric keypad is optional. The keyboard can be located up to 2 cable-feet from the CRT display unit.

The keyboards each measure 16½ inches wide by 3 inches high by 9½ inches deep and weigh 6 pounds. By comparison, the IBM 3277-2 keyboard measures 15¼ to 18 (78-key keyboard) inches wide by 4 inches high by 8½ inches deep and weighs 10 pounds.

PRINTERS: Four serial, impact printer models are available that differ in speed: Model G060, a Centronics 700 rated at 60 characters/second; Model G088, a Centronics 588 rated at 88 characters/second; Model G120, a Centronics 500 rated at 120 characters/second; and Model G165, a Centronics 501 rated at 165 characters/second. All models provide 132 print positions, a 64-character ASCII print set with options for 96 or 128 characters, and an adjustable tractor feed that will accommodate pin-fed, five-part, continuous forms from 4 to 14.9 inches wide (Models G088, G120, and G165) or up to 17.3 inches wide (Model G060). Model G060 features programmable line lengths of 40, 64, or 80 characters or a variable number of characters per line as defined by the program. Printed characters are formed via a 9-by-7 dot matrix. Features include a 1920-character buffer, vertical format control (via a 2-channel paper tape loop), audible alarm, and automatic motor control. The audible alarm sounds when operator intervention is required such as when paper is depleted or the program signals attention. The automatic motor control disconnects the printer motor at a predetermined time after the last print operation. A Systems Available light, not provided in the IBM printers, indicates an on-line condition.

PRICING

The G77 Information Display Terminal and G Series Printers are available for purchase or on a 2-, 3-, or 4-year lease, excluding maintenance.

Separate maintenance contracts for prime-shift (9 hrs./day, 5 days/week) are available for leased or purchased equipment. Installation charges are $25 per display station and $50 per printer. The investment tax credit is passed on to the customer at his request. Minimal training is provided at time of installation. The G77 terminal and G Series Printers are priced as follows:

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Genesis One IBM 3270 Replacement
Display Stations and Printers

	Monthly Rental (1)				
	2-Yr. Lease	3-Yr. Lease	4-Yr. Lease	Purchase	Monthly Maint.(4)
C77 Display Unit (2)	$101	$ 89	$85	$3,392	$12
Keyboards:					
66-key data entry	12	11	10	408	3
78-key data entry	24	23	22	816	5
66-key typewriter	12	11	10	408	3
78-key typewriter	24	23	22	816	5
78-key console	24	23	22	816	5
15-key Numeric Pad	9	8	7.50	292	1
Audible Alarm	3	2.50	2	136	N/C
Security Keylock	70(3)	70(3)	70(3)	70(3)	N/C
Selector Light Pen	28	27	26	867	1
ID Card Reader	Contact Vendor				
G Series Printers:					
Model G060; 60 cps	180	165	160	5,000	35
Model G088; 88 cps	230	205	200	6,000	40
Model G120; 120 cps	245	220	215	6,500	40
Model G165; 165 cps	300	275	270	7,000	70

(1) Includes prime-shift maintenance.

(2) Does not include keyboard.

(3) Single-use charge.

(4) Prime-shift maintenance; full maintenance for 24 hours/day, 7 days/week is 40% higher.

N/C—No charge.

Cables are priced at $11 per cable plus $0.11 per cable-foot.■

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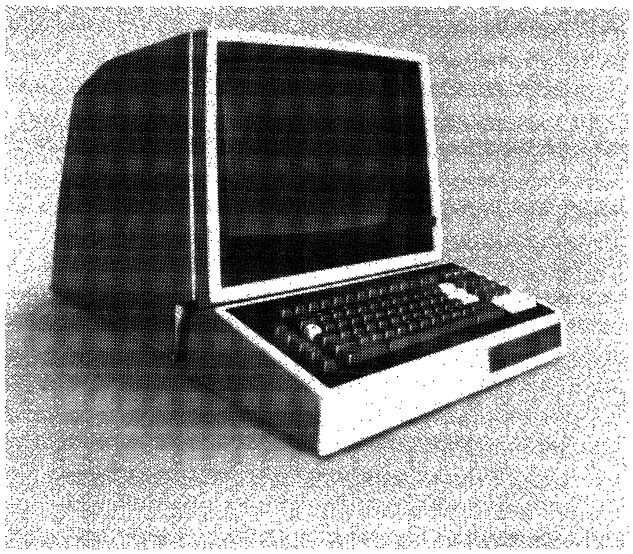

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Because the G77 displays each character via a 5-by-7 dot matrix, it is reasonable to assume that its character clarity and sharpness (resolution) is somewhat less than that of IBM 3270, which uses a 7-by-9 dot matrix to form each character. This deficiency was quite apparent in the original models of the G77, but Genesis One has since alleviated the problem (without changing the character matrix) by refining the character generator. The G77 terminal now includes a new character generator and monitor; according to Genesis One, its display clarity is equal to that of the IBM 3277.

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The G77 includes standard and optional IBM 3277-2 features plus a few key enhancements. The G series printers offer print rates of 88, 120, and 165 cps and 132 print positions.

Monthly savings of 20 to 32 percent can be realized on the rental cost, compared to the IBM 3277-2, under two through four year leases. For purchased units, a saving of 13 percent compared to IBM's price tag can be realized. Printers are priced up to 68 percent higher (under a two-year lease) than IBM's 40- and 66-cps buffered printers but are faster.

The G77 terminal was originally produced for Genesis One by Texas Scientific, who Genesis One acquired in February 1976.

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Light pen and ID card reader, optional features for the IBM 3270, are also available from Genesis One.

The G Series Printers provide substantial increases in cost-performance over the IBM 40- and 66-cps printers. These printers, like the IBM printers, print up to 132 print positions and are equipped with 1920-character buffers.

USER REACTION

In Datapro's April 1976 survey of alphanumeric display terminal users, 10 users reported on their experience with 102 Genesis One G77 display stations. Their ratings are presented below.

	Excellent	Good	Fair	Poor	WA*
Overall performance	3	7	0	0	3.3
Ease of operation	4	5	1	0	3.3
Display clarity	2	5	3	0	2.9
Keyboard feel and usability	2	5	2	1	2.8
Hardware reliability	4	5	1	0	3.3
Maintenance service	1	7	1	0	3.0
Software & technical support	1	7	0	0	3.1

*Weighted Average on a scale of 4.0 for Excellent.

These users cited the key advantages of the G77 as low cost (10), reliability (4), applicability (3), compact size (2), and strong vendor support (2).

Only one of the 10 users reported equipment unreliability; this user rated reliability as Fair. Another user noted poor support and maintainability as limitations, though this user reported Maintenance Service as Fair and Software and Technical Support as Good. Inflexibility was mentioned twice. And one user complained "it's the vendors only product."

These ratings and overall complimentary remarks for the G77 and its vendor endorse the product as a cost-effective, reliable terminal that merits serious consideration by other prospective users.□

a few of its own. The added functions include a Home cursor control, an optional cursor blinking capability, Field Erase, Automatic Variable Initialization, and Character Repeat. The added Home key moves the cursor to the initial character position of the first unprotected field. When activated by the operator, the Automatic Variable Initialization function identifies variable fields by displaying a dot in each character position. The Character Repeat function permits any character to be repeatedly displayed.

The G77 is available with IBM-equivalent options. Extra-cost options include Security Lock, Audible Alarm, Light Pen, and ID Card Reader. The blinking cursor and numeric lock keyboard features are no-cost options.

COMPONENTS

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A character set of 96 characters, including upper and lower case alphabetics, numerics, and special symbols (as compared with IBM's standard 64-character set), is displayed in green against a dark background, as in the IBM 3277-2. Unlike the IBM 3277-2, which forms each character via a 7-by-9 dot matrix, the G77 uses a 5-by-7 dot matrix.

The display unit measures 16½ inches wide by 15 inches high by 18.3 inches deep and weighs 57 pounds. Heat dissipation is 490 BTU/hr. By comparison, the IBM 3277 Model 2 measures 16 inches wide by 19 inches high by 21 inches deep and weighs 85 pounds. Its heat dissipation is 525 BTU/hr.

Five keyboards are available: a 66- or 78-key EBCDIC typewriter-style keyboard, a 66- or 78-key EBCDIC data entry keyboard, and a 78-key EBCDIC console keyboard. The 78-key keyboards include 12 Program Function keys; each of these keyboards is identical with its IBM counterpart. A 15-key numeric keypad is optional. The keyboard can be located up to 2 cable-feet from the CRT display unit.

The keyboards each measure 16½ inches wide by 3 inches high by 9½ inches deep and weigh 6 pounds. By comparison, the IBM 3277-2 keyboard measures 15¼ to 18 (78-key keyboard) inches wide by 4 inches high by 8½ inches deep and weighs 10 pounds.

PRINTERS: Three serial impact printers are available that differ in speed only: Model G088, a Centronics 588 rated at 88 chars./second; Model G120, a Centronics 500 rated at 120 chars./second; and Model G165, a Centronics 501 rated at 165 chars./second. All models provide 132 print positions, a 64-character print set with options for 96 or 128 characters, and an adjustable ctor feed that will accommodate pin-fed, five-part, continuous forms from 4 to 14-7/8 inches wide. Printed characters are formed via a 9-by-7 dot matrix. Features include a 1920-character buffer, vertical format control (via a 2-channel paper tape loop), audible alarm, and automatic motor control. The audible alarm sounds when operator intervention is required such as when paper is depleted or the program signals attention. The automatic motor control disconnects the printer motor at a predetermined time after the last print operation. A Systems Available light, not provided on the IBM printers, indicates an on-line condition.

PRICING

The G77 Information Display Terminal and G Series Printers are available for purchase or on a 2-, 3-, or 4-year lease, excluding maintenance.

Separate maintenance contracts for prime-shift (9 hrs./day, 5 days/week) are available for leased or purchased equipment. Installation charges are $25 per display station and $50 per printer. The investment tax credit is passed on to the customer at his request. Minimal training is provided at time of installation. The G77 terminal and G Series Printers are priced as follows:

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Audible Alarm	3	2.50	2	136	N/C
Security Keylock	70(3)	70(3)	70(3)	70(3)	N/C
Selector Light Pen	28	27	26	867	1
ID Card Reader	Contact Vendor				
G Series Printers:					
Model G088; 88 cps	230	205	N/A	6,000	40
Model G120; 120 cps	245	220	N/A	6,500	40
Model G165; 165 cps	300	275	N/A	7,000	70

(1) Includes prime-shift maintenance.

(2) Does not include keyboard.

(3) Single-use charge.

(4) Prime-shift maintenance; full maintenance for 24 hours/day, 7 days/week is 40% higher.

N/C—No charge.

N/A—Not available.

Cables are priced at $11 per cable plus $0.11 per cable-foot.■

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