

General Terminal GT-100 and GT-400 Display Terminals



General Terminal Corporation's GT-100D, shown here with the optional detached keyboard, offers emulation of the Data General Dasher Model 6053.

MANAGEMENT SUMMARY

Infoton, Inc. changed its name to General Terminal Corporation and moved its headquarters to California in January 1980. The company's line of display terminals currently includes the GT-100 series, a family of upwardly compatible ASCII terminals, and the GT-400 series, consisting of an expanded capability ASCII terminal and a Burroughs TD Series replacement. All GTC terminals are Zilog Z-80 microprocessor-based.

The GT-100 Series consists of the following models: the GT-100A, GT-100D, GT-100E, GT-101, and GT-110. General Terminal has designed the GT-100 series so that each model can be factory-upgraded to any other model in the series, as an alternative to purchasing a new terminal each time requirements increase. All GT-100 terminals feature a 12" display screen, with a display capacity of 1920 characters in a 24-line by 80-character format. A 25th line displays status information. Characters are displayed in white, and formed utilizing a 5 x 9 dot matrix on a 7 x 10 field. The 96-character ASCII set, plus a 32-character line drawing set, are displayable. A typewriter-style keyboard (attached) is standard, including a separate numeric keypad and cursor controls. Transmission rates are switch-selectable from 110 to 19,200 bps.

The GT-100A is the low-end model of the series. The unit features character or block mode transmission, a printer port, edit functions including insert/delete line and insert/delete character, erase functions including erase line

A series of teletype-compatible, micro-processor-based display terminals offering a variety of capabilities and emulations.

The GT-100 Series consists of five models, each of which can be factory-upgraded to any other model in the series. Standard features on all GT-100 models include a 12" diagonal display screen with a 1920-character screen capacity, and a typewriter-style keyboard with a 14-key numeric pad. The GT-400 offers extended features including a 2000-character screen capacity, a detachable keyboard, and an additional two pages of display memory as an option. A second GT-400 model offers Burroughs TD Series compatibility.

General Terminal displays are available for purchase only, and range in price from \$995 for the GT-100A to \$1,625 for the GT-400.

CHARACTERISTICS

VENDOR: General Terminal Corporation, 14831 Franklin Avenue, Tustin, CA 92680. Telephone (714) 730-0123.

DATE OF ANNOUNCEMENT: GT-100 Series—October 1978; GT-400 Series—June 1977.

DATE OF FIRST DELIVERY: GT-100 Series—November 1978; GT-400 Series—June 1977.

NUMBER DELIVERED TO DATE: Information not available.

SERVICED BY: GTC and General Electric.

MODELS

The GT-100 Series consists of the following models: the GT-100A, GT-100D, GT-100E, GT-101, and GT-110. All models are stand-alone, teletype-compatible ASCII terminals, based on a Z-80 microprocessor. The GT-100A is the low-end model in the series; the GT-100D is a Data General Dasher emulator; the GT-100E offers emulation of the ADDS Consul 520, Hazeltine 1500, or DEC VT-52. The GT-101 and GT-110 offer extended features and capabilities.

The GT-400 Series consists of two models: the GT-400 and GT-400B. The GT-400 is a stand-alone, teletype-compatible terminal with advanced features; the GT-400B is a stand-alone terminal offering Burroughs TD 830 Series emulation.

TRANSMISSION SPECIFICATIONS

For the GT-100 Series, transmission is asynchronous, in half- or full-duplex (full-duplex only for the GT-100D), at switch-selectable rates of 110, 200, 300, 1200, 2400, 4800, 9600, or 19,200 bits per second. Transmission on the GT-

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▷ and erase page, smooth scroll, reverse video, and half/full intensity selectable on a character by character basis. The GT-100D is a Data General Dasher Model 6053 replacement. Standard features on the GT-100D include character mode transmission, erase functions including erase to end of line and erase page, smooth scroll, reverse video, half/full intensity, and 11 function keys, and line graphics. The GT-100E is the company's emulator terminal, offering emulation of the ADDS Consul 520, the DEC VT-52, and the Hazeltine 1500.

The GT-101 offers all of the features of the GT-100A, plus a printer port, user-settable clock, line drawing set, and 8 user-programmable function keys. The high-end of the GT-100 series, the GT-110, offers additional features such as block graphics, a bidirectional printer port, line transmit, and video attributes including reverse video, full/half intensity, underline, blink, and security. Options available on all GT-100 terminals include a detached keyboard, data cable, and green (P31 phosphor) characters. A composite video option is available on all models except the GT-100E.

The GT-400 Series consists of two models. The basic GT-400 features a display capacity of 2000 characters in a 25-line by 80-character format. Characters are displayed in white, and formed utilizing a 9 x 9 dot matrix. The GT-400 can transmit in block or character mode, at 16 internally generated, switch-selectable speeds up to 19,200 bps. Standard features include a detachable keyboard, eight function keys, edit functions, erase functions, half/full intensity fields, underline fields, blink fields, and security fields. Optional features include two additional pages of display memory, 16 additional function keys, green characters, a line drawing character set, buffered printer controller, international keyboards, and Hazeltine 2000 emulation. The GT-400B offers Burroughs TD-830 Series emulation. Features include: operation on asynchronous, synchronous, or TDI communications lines in single device configurations; multipage display; user-programmable function keys; and switchable negative video page.

In addition to its corporate headquarters in Tustin, California, General Terminal maintains a manufacturing plant in Burlington, Massachusetts (formerly Infoton headquarters). GTC has recently contracted with General Electric to provide third party maintenance service on a nationwide basis.

USER REACTION

Datapro conducted telephone interviews with four users of the General Terminal GT-100 and GT-400 display terminals in July 1981. Those contacted reported on a total of 547 units: 277 GT-100s and 270 GT-400s. The terminals were installed for an average of over two years.

▶ 400 is asynchronous, in half- or full-duplex modes, at 16 internally generated switch-selectable rates of 50, 75, 110, 134.5, 150, 200, 300, 600, 1200, 1800, 2400, 3600, 4800, 7200, 9600, or 19,200 bps. Transmission on the GT-400B can be asynchronous, synchronous, or over TDI communications lines in single-device or concatenation configurations.

All models use the 8-level, 10- or 11-unit ASCII code. Odd, even, mark, or space parity are switch-selectable. An RS-232-C and 20mA current loop interface are provided. A serial printer port is standard on the GT-100A, GT-100E, GT-101, GT-110, and GT-400; it is optional on the GT-100D.

DEVICE CONTROL

GT-100A: Transmission is in either character or block mode. Line and keyboard command functions include line feed, carriage return, new line, erase line, erase page, forward and back tab, X and Y cursor positioning, status line on/off, caps only, and keyboard lock/unlock. Cursor controls move the cursor up, down, left, right, and home; the cursor appears as a blinking underline, and can be destructive or non-destructive via mode setting. Edit functions include insert/delete line and insert/delete character. Half/full intensity video is selectable on a character-by-character basis without the loss of displayable positions. Reverse video (screen) is also available.

GT-100D: Transmission is on a character-by-character basis. Line and keyboard command functions include carriage return, new line, erase to end of line, erase page, X and Y cursor positioning, status line on/off, line/local, smooth scroll, and caps only. Cursor controls move the cursor up, down, left, right, and home; the cursor appears as a blinking underline. Half/full intensity video is selectable on a character-by-character basis. Reverse video (screen) is standard.

GT-100E: Transmission is in either character or block mode. Operating as a Hazeltine 1500 emulator, line and keyboard command functions include line feed, carriage return, new line, X and Y cursor positioning, line/local, status line on/off, half/full intensity, caps only, and keyboard lock/unlock. Edit functions include insert/delete line. As an ADDS 520 emulator, line and keyboard command functions include line feed, carriage return, erase page, X and Y cursor positioning, line/local, status line on/off, back space, caps only, roll/page, break, clear, rub out, and keyboard lock/unlock. As a DEC VT-52 replacement, line and keyboard command functions include line feed, carriage return, new line, X and Y cursor positioning, line/local, X-on/X-off, forward tab, status line on/off, caps only, scroll, delete, back space, and copy on/off. Cursor controls for all emulations move the cursor up, down, left, right, and home.

GT-101: Transmission is in either character or block mode. Line and keyboard command functions include line feed, carriage return, new line, X and Y cursor positioning, X-on/X-off, line/local, status line on/off, half/full intensity, caps only, erase line, erase page, print page, forward and back tab, smooth scroll, reverse video, display interface on/off, printer interface on/off, and keyboard lock/unlock. Edit functions include insert/delete line and insert/delete character. Cursor controls move the cursor up, down, left, right, and home; the cursor appears as a blinking underline, and can be destructive or non-destructive via the mode setting.

GT-110: Transmission is in either character, line, or block mode. Line and keyboard command functions include line feed, carriage return, new line, X and Y cursor positioning, X-on/X-off, line/local, status line on/off, half/full inten-

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► The ratings are as follows:

	Excellent	Good	Fair	Poor	WA*
Overall performance	3	1	0	0	3.8
Ease of operation	1	3	0	0	3.3
Display clarity	1	3	0	0	3.3
Keyboard feel & usability	2	2	0	0	3.5
Hardware reliability	4	0	0	0	4.0
Maintenance service	3	1	0	0	3.8
Technical support	2	0	0	0	**

*Weighted Average based on a scale of 4.0 for Excellent.

**Weighted Average invalid for less than three responses.

The users appear greatly satisfied with the General Terminal displays. Comments on sound construction, reliability and flexibility highlighted the users' description of their GT-100s and GT-400s. When asked why the units deserved such favorable ratings, one user replied, "Basically, their architecture." He praised the terminals' flexibility as a result of being microprocessor-controlled and their ability to absorb the abuse of a hostile environment (the DP learning center of a large university).

Two users commended the keyboard as easy to use and dirt resistant. One user was particularly pleased with the terminal's ability to cool without a fan, which resulted in both a quieter environment and less dirt being drawn into the unit. Another user felt his terminals were easy to work on, and featured a large repertoire of function commands. "It's really quite a good terminal for its price," stated another.

When asked to describe any weaknesses of the units, two users said they experienced minor problems with the keyboard. □

► **sity, blinking fields, underline fields, reverse video fields, security fields, caps only, erase line, erase page, print page, forward and back tab, smooth scroll, protected fields, display interface on/off, printer interface on/off, and keyboard lock/unlock. Edit functions include insert/delete line and insert/delete character. Cursor controls move the cursor up, down, left, right, and home; the cursor appears as a blinking underline, and can be destructive or non-destructive via the mode setting.**

GT-400: Transmission is in either character or block mode. Line and keyboard command functions include carriage return, line feed, incremental cursor positioning, line/local, half/full intensity field, blink field, underline field, reverse video field, security field, numeric-only field, protected/unprotected data, tab/back tab, columnar tab, erase page/field, caps only, transmit page/field, printer on/off, and keyboard lock/unlock. Edit functions include insert char-

acter/line and delete character/line. Cursor controls move the cursor up, down, left, right, and home. X and Y cursor addressability and cursor sensing are standard.

COMPONENTS

GT-100 CRT DISPLAY UNIT: A 12" (diagonally measured) CRT monitor with a 1920-character screen capacity, arranged in 24 lines of 80 characters each. A 25th line displays terminal status information. All models display the 96 character ASCII set plus 32 line drawing characters. Characters are formed utilizing a 5 x 9 dot matrix on a 7 x 10 field; and displayed in white (P4 phosphor) on a dark background. Green (P31 phosphor) characters are optionally available.

GT-400 CRT DISPLAY UNIT: A 12" (diagonally measured) CRT monitor with a 2000-character screen capacity, arranged in 25 lines of 80 characters each. The 128 ASCII character set is displayable. Characters are formed utilizing a 9 x 9 dot matrix, and displayed in white (P4 phosphor) on a dark background. Green (P31 phosphor) characters are optionally available.

GT-100 KEYBOARDS: All models feature an attached, typewriter-style keyboard with a 14-key numeric cluster. On the GT-100A, eight user-programmable function keys are optional. On the GT-100D, 11 function keys are standard, eight of which are programmable. The GT-100E features eight function keys in the DEC VT-52 emulator only. Eight user-programmable function keys are a no cost option on the GT-101 and standard on the GT-110. All keyboards generate the ASCII character set, and feature a solid state design using a capacitively coupled key switch. A detachable keyboard is optional for all models.

GT-400 KEYBOARDS: Two keyboards are available for the GT-400. The Model GT-400/4 keyboard is a typewriter-style, detached keyboard featuring a 14-key numeric cluster, a 9-key cursor control and edit key cluster, and eight function keys. The Model GT-400/5 keyboard is identical to the GT-400/4, but with 16 additional function keys.

PRICING

General Terminal Corporation offers its terminals for purchase only. Depot maintenance service is available from the company's West Coast (Tustin, CA) and East Coast (Burlington, MA) facilities. In addition, GTC has contracted with General Electric to provide third party maintenance service on a nationwide basis.

	Purchase Price
GT-100A	\$ 995
GT-100D	1,595
GT-100E	995
GT-101	1,095
GT-110	1,095
GT-400	1,625
GT-400B	2,795■

