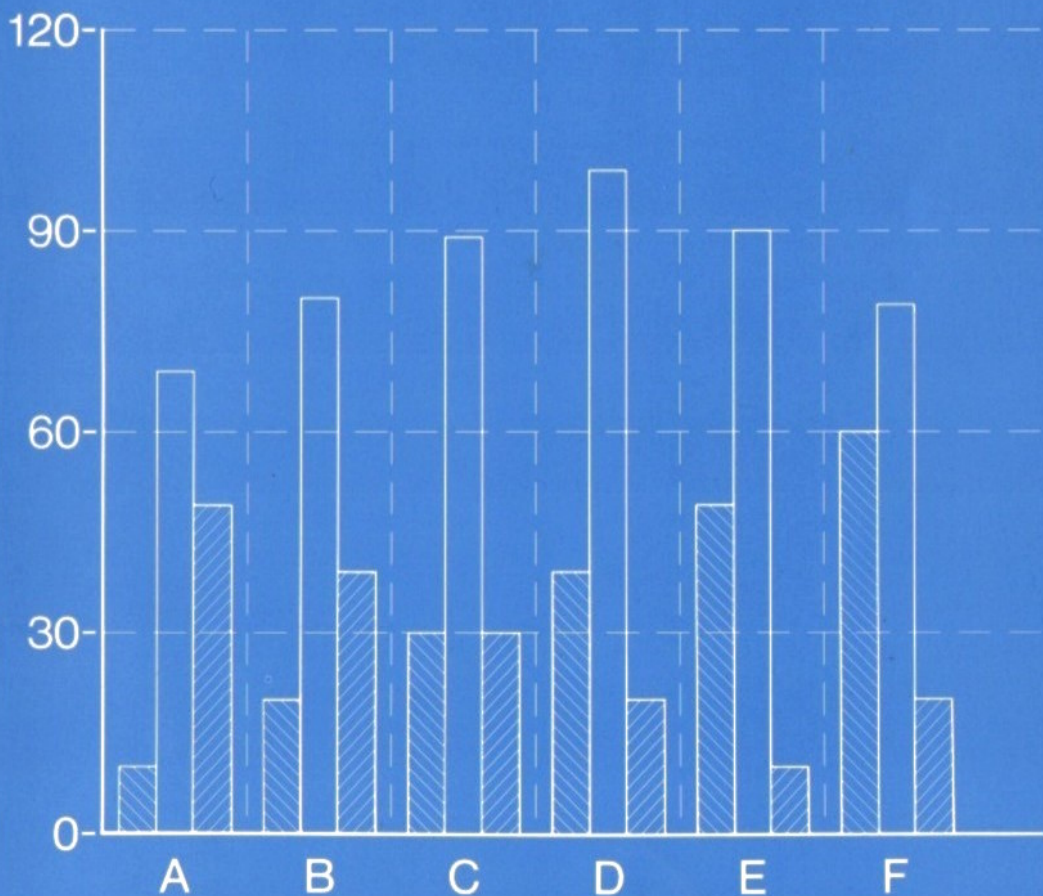


TOSHIBA



T-GRAPH USER'S GUIDE



Contents

1. T-GRAPH SYSTEM CONFIGURATION	2
2. T-GRAPH SPECIFICATIONS	2
3. HOW TO START UP T-GRAPH	3
4. T-GRAPH OPERATING PROCEDURES	4

NOTICE

1. The contents of this manual are subject to change without prior notice.
2. We are not responsible for any financial loss which might result from the use of "T-GRAPH",

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1. T—GRAPH SYSTEM CONFIGURATION

The following hardware configuration is required for T—GRAPH operations:

- * Computer TOSHIBA Home Computer Model HX-10
- * Printer TOSHIBA Plotter Printer Model HX-P570
TOSHIBA Dot Printer Model HX-P550
(for hardcopy)
- * Home TV set
- * Cassette recorder TOSHIBA Cassette Recorder KT-P22

2. T—GRAPH SPECIFICATIONS

Available graph types	1) Bar graph 2) Polygon graph 3) Circular graph 4) Band graph
Hatching type	1) No hatching 2) Hatching in black 3) Hatching in other colours
Number of data items:	12 items on column, and 4 items on row Average and total on column Average and total on row
Usable numeric data range:	Integers 1 to 99,999,999
Fullscale setting:	Auto scale or Manual scale
Division:	On the plotter, divisions for dotted lines are specifiable.
Messages and ruled lines:	Up to 100 characters as well as ruled lines can be inserted into a graph.
Output:	Video monitor Graphs Plotter Graphs or tables (114 mm or A4 in size) Dot Printer Hardcopy graphs or tables
Data storage medium:	Cassette tape

3. HOW TO START UP T-GRAPH

- (1) Power up the computer and all peripheral devices (Home TV set, printer, etc.)
- (2) Insert the T-GRAPH program tape into your cassette recorder.
- (3) Press the PLAY button on the cassette recorder to load the program.
- (4) Type BLOAD "CAS:", R and press the key.
- (5) The message "FOUND: TGRAPH" will soon appear on the screen.
- (6) If program loading was not successful, turn up the volume control on your recorder. Rewind the tape and repeat from step (3).
- (7) If the T-GRAPH program is loaded properly, the following opening message will appear on the screen. It will soon be replaced with the menu.

T-GRAPH

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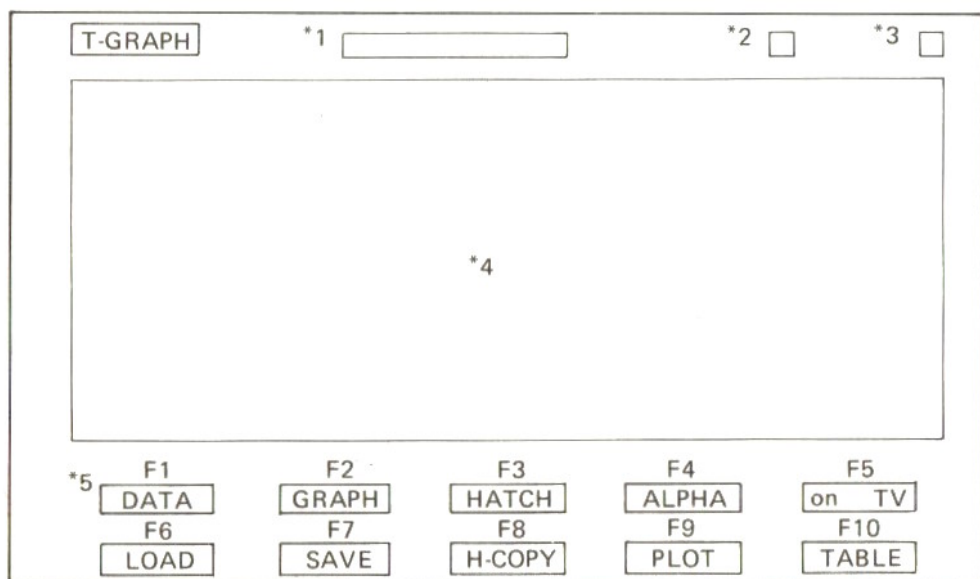
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4. T-GRAPH OPERATING PROCEDURES

- (0) Menu
- (1) Data input
- (2) Graph mode selection
- (3) Hatching mode selection
- (4) Inserting messages
- (5) Drawing a graph on the TV screen
- (6) Loading data from a cassette tape
- (7) Saving data to a cassette tape
- (8) Hardcopy (graph) output to a dot printer
- (9) Hardcopy (graph) output to a plotter printer
- (10) Hardcopy (table) output to plotter printer or a dot printer

(0) MENU



- *1 List of items used in the graph
- *2 Graph mode
- *3 Hatching mode
- *4 Graph display screen
- *5 Function key assignment (menu)

(1) DATA INPUT

The DATA INPUT display allows you to enter the data required for drawing a graph. To select this display, press the **[F1]** key from menu screen. The screen will look as follows.

T-GRAPH		by TOSHIBA		[DATA INPUT]	
No.	NAME	ITEM=A	TOTAL		
1		0	0		
2		0	0		
3		0	0		
4		0	0		
5		0	0		
6		0	0		
7		0	0		
8		0	0		
9		0	0		
10		0	0		
11		0	0		
12		0	0		
	SUM				

[SELECT] - - - - - change ITEM [F1] - SORT
[ESC] - - - - - return to menu
[TAB] - - - - - change TOTAL or MEAN

- Specifying data names

The cursor is initially positioned at NAME 1. You may specify a 1 to 4 character data name, such as JAN, FEB, MAR, APR, MAY, JUNE, etc. Press the **[RETURN]** key or the cursor key following the data name 1. Repeat the above procedure for other data names. To correct a character, reposition the cursor to the character position using the cursor keys or the **[BS]** (backspace) key. Then type the correct character.

- Selecting an item

To enter ITEM=A, press the **[SELECT]** key. The item will advance in the following order each time you press the **[SELECT]** key. NAME → A → B → C → D → NAME → A → B, etc.

- Selecting MEAN column

If you wish to get data average, press the **TAB** key.

The MEAN column will replace the TOTAL column. The **TAB** key will return you to the TOTAL column. The average is calculated using the number of data items already entered.

- Sorting

Data can be sorted in descending order, Press the **F1** key. The following message will appear:

Please set ITEM.
Press [A, B, C, D, M, T] key.
Press other key for return.

- Now type the item name to be sorted, [A, B, C, D, M, or T]
If you have accidentally pressed the **F1** key, press any other key to return to the DATA INPUT display.
- Returning to the menu.
The **ESC** key returns you to the menu.

(2) GRAPH MODE SELECTION

Press the **F2** key. The bar graph indicator shown in the upper right area of the screen will change to a polygon. The graph mode advances in the following order, each time you press the **F2** key: bar graph → polygon graph → circular graph → band graph → bar graph, etc. Your graph is plotted on the screen or plotter printer in the mode you have selected.

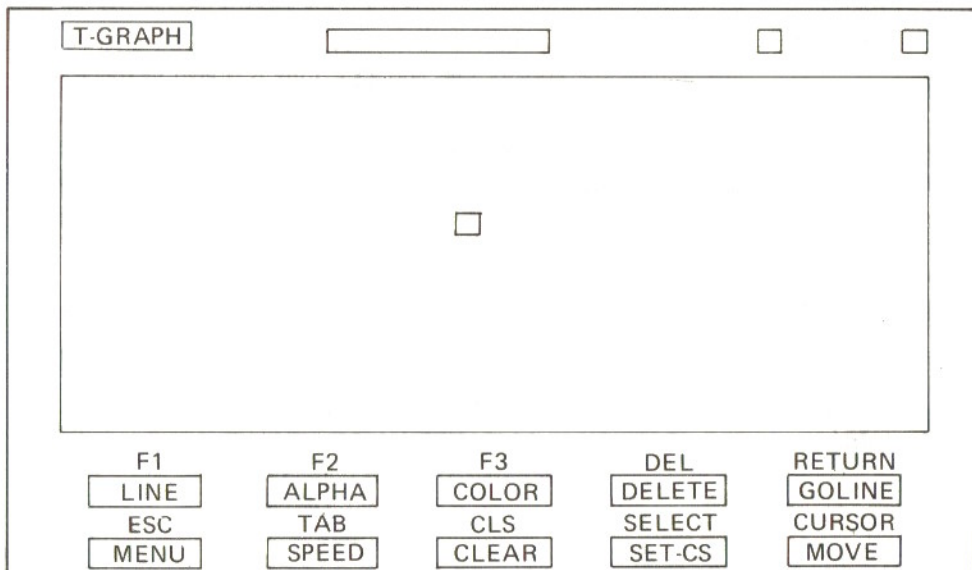
(3) HATCHING MODE SELECTION

Press the **F3** key. The hatching mode indicator in the upper right corner of the screen will change. The hatching mode advances as follows each time you press the **F3** key: non-hatching → hatching in black → hatching in colour → non-hatching, etc. The hatching mode is enabled in bar, circular, and band graph modes only. If you specify colour hatching for a polygon graph, a multi-coloured graph will automatically appear.

(4) INSERTING MESSAGES

Graph names or other messages can be output to the screen or printer in a graph.

Press the **F4** key. The screen will look as follows:



A square cursor (□) appears at the centre of the screen, with new function key assignments (see above figure). Function key assignments are as follows:

- F1** Selects the Line mode. Two cursors (+ and ■■), appear on the keys. these cursors to the desired locations on the screen and press the **RETURN** key.
- F2** Selects the ALPHA (alphanumeric) mode. In this mode you can type a character to the cursor (□) position. Enter the desired message while shifting the cursor with the **⇒** **⇐** **↑** **↓** (cursor) Keys.

F3

Changes the colour of characters or lines. The colour changes in the following order, each time you press this key: black → green → blue → red → black, etc.

DEL

Deletes the last character or line from the screen.

RETURN

In the Line mode, the **RETURN** key is used to draw a straight line joining the cursors (**+** and **■**). Line is drawn in specified colour.

ESC

Returns to the menu screen.

TAB

Moves the cursor (**□**) to the next tab position.

CLS

Clears the screen. Press the **HOME** key while holding down the **SHIFT** key.

SELECT

In the Line mode, moves the **■** cursor to the location of the + cursor.



Moves the cursor (**□** or **+**) in the direction of the arrow.

(5) DRAWING A GRAPH ON THE SCREEN

Press the **F5** key. The following message will appear.

Please set the item.
Press [A, B, C, D, M, T] key.
[DEL] = reset [RETURN] = Ok!

Select the data item to be drawn into a graph, from the [A, B, C, D, M (Mean), or T (Total)].

You can select up to 4 data items for a bar or polygon graph. To correct a selected data item, press the **DEL** key. Press the **RETURN** key after selecting required items.

Only one data item is allowed for a circular or band graph. In this case the circular or band graph is drawn on the screen immediately, in the specified graphic and hatching modes.

For a bar or polygon graph, the following message will appear on the screen:

Please set maximum value. If
automatic set, press RETURN.
MAXIMUM VALUE = 0

Type fullscale values and press the **RETURN** key. If you press the **RETURN** key without specifying fullscale values, the system will automatically select default values. Your graph will then be drawn on the screen using the default graph and hatching modes.

(6) LOADING DATA FROM A CASSETTE TAPE

Press the **F6** key (press the **F1** key while holding down the **SHIFT** key). The following message will appear:

Press [S] key for data load.
Press other key for menu.

Insert the data tape into the cassette recorder, and press the **PLAY** button and **S** key in the given order. If you have accidentally pressed the **F6** key, press any key except **S**. If the specified data is found, the message "LOADING DATA" will appear on the screen. When data has been loaded, the display will return to the menu.

If you have accidentally pressed **S** key, press the **STOP** key while holding down the **CTRL** key to return to the menu.

(7) SAVING DATA TO A CASSETTE TAPE

Press the **[F7]** key (press the **[F2]** key while holding down the **[SHIFT]** key). The following message will appear:

Press **[S]** key for data save.
Press other key for menu.

Insert a blank tape into your cassette recorder, set the recorder to record, and press the **[S]** key. If you have accidentally pressed the **[F7]** key, press any key except **[S]**. When data saving is initiated, the message "SAVING DATA" will appear. The system will return you to the menu after saving data.

If you have accidentally pressed **[S]** key, press the **[STOP]** key while holding down the **[CTRL]** key to return to the menu.

(8) HARDCOPY (GRAPH) OUTPUT TO A DOT PRINTER

The graph, now on the screen, can be output to a dot printer. If you are using the specified printer, simply press the **[F8]** key (press the **[F3]** key while holding down the **[SHIFT]** key). The following message will appear:

Press **[S]** key for hard copy.
Press any other key,
if plotter-printer.

Press the **[S]** Key. If your printer is a plotter printer, press any key except **[S]** to return to the menu.

If you have accidentally press **[S]** key, press the **[STOP]** key while holding down the **[CTRL]** key to return to the menu.

(9) **HARDCOPY (GRAPH) OUTPUT TO A PLOTTER PRINTER**

Graphs can be plotted on the attached plotter printer in the current graph and hatching mode. Press the **[F9]** key (press the **[F4]** key while holding down the **[SHIFT]** key). The following message will appear:

Press **[L]** key for large size.
Press **[S]** key for small size.
Press other key for menu.

If you are plotting on an A4 sheet, press the **[L]** key. If you are plotting on 114 mm roll paper, press the **[S]** key. If you have accidentally pressed the **[F8]** key, press any other key to return to the menu.

When you specify the paper size, the following message will appear for a bar or polygon graph:

Press **[Y]** key for line scale.

If you wish to plot dotted-line divisions of scale, press the **[Y]** key. If not, press any key except **[Y]**. The following messages will appear:

Please set the item.
Press **[A, B, C, D, M, T]** key.
[DEL] = reset **[RETURN]** = Ok!

Select the data items to be plotted into a graph using the **[A, B, C, D, M, and/or T]** keys.

You may select up to 4 data items for a bar or polygon graph. To correct a selected data item, use the **[DEL]** key. After specifying data items, press the **[RETURN]** key.

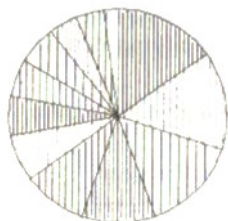
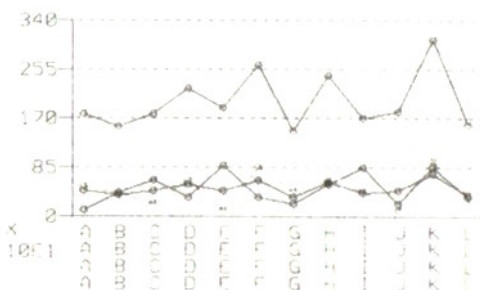
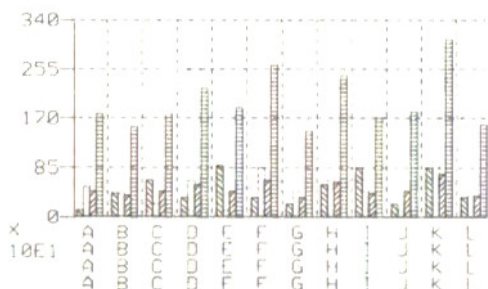
For circular or band graphs, you may select only one data item. Plotting will start immediately.

For a bar or polygon graph, the following message will appear:

Please set maximum value. If
automatic set, press RETURN.
MAXIMUM VALUE=0

Type fullscale values, then press the **[RETURN]** key. If you press only the **[RETURN]** key without entering the fullscale data, the computer will select default values setting. The plotter will now start plotting in the default (graph and hatching) modes.

When plotting, press the **STOP** key while holding down the **CTRL** key to return to the menu.

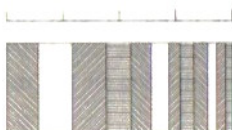


ITEM=A

EEEE	14%
KKKK	14%
LLLL	14%
CCCC	11%
HHHH	9%
BBBB	7%
IIII	5%
FFFF	5%
DDDD	5%
JJJJ	4%
GGGG	4%
AAAA	2%

TOSHIBA HX-100

0 25 50 75 100



ITEM=A

EEEE	14%
KKKK	14%
LLLL	14%
CCCC	11%
HHHH	9%
BBBB	7%
IIII	5%
FFFF	5%
DDDD	5%
JJJJ	4%
GGGG	4%
AAAA	2%

(10) HARDCOPY (TABLE) OUTPUT TO A PLOTTER PRINTER OR A DOT PRINTER

This feature lists the current graph data to a printer. Press the **F10** key (press the **F5** key while holding down the **SHIFT** key). The following message will appear:

[L] = large size for plotter.
[S] = small size for plotter.
[D] = dot printer [ESC] = menu

If listing on A4 sheet on a plotter printer, press the **L** key. If listing to a 114 mm roll paper, press the **S** key. For a dot printer, press the **D** key. If you have accidentally pressed the **F10** key, press the **ESC** key to return to the menu. when printing, press the **STOP** key while holding down the **CTRL** key to return to the menu.

TITL	A	B	C	D	MEAN	TOTAL
AAAA	123	543	765	345	444	1,776
BBBB	435	434	543	145	389	1,557
CCCC	656	234	464	456	452	1,810
DDDD	344	645	275	987	562	2,251
EEEE	890	123	198	678	472	1,889
FFFF	345	867	987	456	663	2,655
GGGG	245	455	545	234	369	1,479
HHHH	565	643	376	876	615	2,460
IIII	865	456	187	213	430	1,721
JJJJ	255	123	956	498	458	1,832
KKKK	876	987	567	666	774	3,096
LLLL	345	378	456	444	405	1,623
MEAN	890	123	198	678	472	1,889
SUM	345	867	987	456	663	2,655

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