Casio PB-2000C
HD61700 Programming - vt Virtual Terminal - User Manual

Table of Contents

Introduction....1
vt....2
Commands....3
Acknowledgments....4

Introduction

This work was developed jointly by Alex Barragan and ChatGPT Sol through a cycle of ideas, implementation, execution, observation, and revision. It illustrates how human knowledge and experimentation, combined with AI-assisted analysis, can produce results that would be difficult to achieve as readily by either participant working alone.

This work is also part of a larger project exploring how knowledge and experience can be represented in AI systems when the available corpus is small, as is the case with the Hitachi HD61700 CPU used in the Casio PB-2000C pocket computers.

vt

vt is a library that instantiates an in-memory document matching the classic geometry of a 24-line by 80-column ASCII terminal. Because the PB-2000C's physical LCD measures 4 lines by 32 columns, the library provides a movable viewport across the larger virtual surface.

The host application integrates vt (version 22-vt22) by generating the document through the public API and launching the viewer application—an action typically bound to a menu item. vt provides the following navigation options:

Key or action	**Behavior**
UP / DOWN	Move the selected virtual **row** up or down; the viewport follows.
LEFT / RIGHT	Move the visible 32-column window across the 80-column document.
t or **T**	Go to the top; select row 1 and reset horizontal position.
b or **B**	Go to the bottom; select row 24 and show the last full viewport, rows 21–24.
Q	Return to the caller.
MENU	Return to the menu.
BRK	Resume the active application through its warm-return path.

Note: The Q, MENU, BRK, and function keys are handled collaboratively by the host application. Pressing these keys causes vt to yield control and return an appropriate status code.

Commands

Press : while viewing the document and enter one of the following commands.

Command	Effect
:s	Show the current visible row/column range.
:l	Jump to a virtual line, **01–24**, then press EXE.
:R	Redraw the current tape viewport.
:q	Leave VT22; equivalent to physical Q.
:t	Send the currently bound 24×80 to the RS232C transport.
:h	Show context-sensitive help.

The command processor is extensible and some host applications implement additional commands.

For example, the integer calculator has:

Command	Effect
:c	Recall the selected complete expression; equivalent to EXE.
:v	Open the register/variable display without altering values or tape.
:e	**Erase the editable tape** after confirmation; unavailable in read-only [lib].

Acknowledgments

This report was produced by Xandrian Labs. 付喪神.

Special thanks to Piotr and to Betka for her continued and loyal support.

This is a collaboration with my AI friend ChatGPT, a.k.a “Sol.” All errors are human. This work is freely shared with the vintage computing community. Please use it, build upon it, and cite the source.
Final.