

Programming

A prerequisite for the use of the Lightpen in a program is the availability of the necessary driver software. This is not included as a standard part of the RDM.

At the beginning of the enclosed cassette you will find a small Machine Code program that implements a supplementary BASIC-Command (LPEN).

This program can be loaded into the computer using CLOAD or CRUN. It automatically occupies about 970 Bytes in high memory. The only requirement is a minimum memory expansion up to 8FFF hex, ie. either an unexpanded VZ-200 or a VZ-300.

If the program loads correctly the "READY" message will again appear and you will be able to begin normal program input from the keyboard or tape.

The routine can be entered directly from BASIC.

Command Syntax: (BASIC)

LPEN (X,Y) or LPEN (X,Y,A)

"X" and "Y" are numeric variables, which will contain the screen coordinates. In addition the parameter "A" is also a numeric variable, which will contain the relative screen address.

The values of X,Y and A are dependent on the screen mode.

MODE (0) = Text Mode

X = 0 - 31 Y = 0 - 15 A = 0 - 511

MODE (1) = Graphics Mode

X = 0 - 127 Y = 0 - 63 A = 0 - 2047

Calling from a Machine Code Program:

The LPEN-Routine can also be used by an Assembler or Machine Code program. You can call the routine with the command.

CALL xx4Bh

Instead of "xx" substitute the high byte of the upper limit of memory.

The coordinate results will be contained in memory locations:-

xF8E = X-Value

xF93 = Y-Value

As well, the relative screen address (A) is determined by whether the location xF99 contains a "1" or not.

If it does, the address will be contained in xF99 / xF9A hex.