USAG

Software for HP 49/50

version 1.3

maintained by

Gustavo Portales

www.gaak.org - hp@gaak.org

Notice

This software is provided "as is" and is subject to change without notice. GaaK makes no warranty of any kind with regard to this software, including, but not limited to, the implied warranties of merchantability and fitness for a particular purpose; nor are they liable for any errors herein or for incidental or consequential damages in connection with the furnishing, performance, or use of this software.

Overview

The USAG (usage) application, based on "USAG" for HP 48 written by "Hewlett-Packard Company", enables you to review the stack argument object type usage for any command built into the HP 49/50 or any library command.

Installation

Transfer the usag.HP file from your computer to the calculator. The USAG menu label will show up in your HP 49/50 VAR menu.

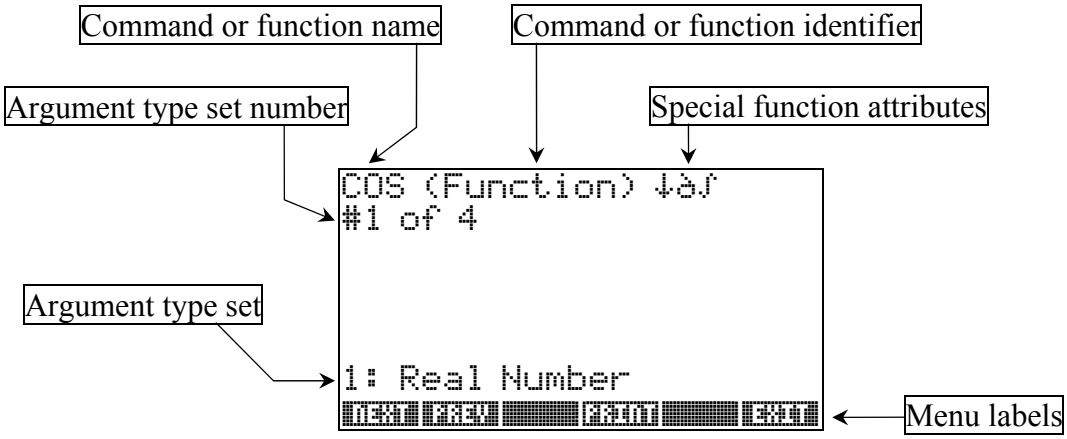
Procedure

Enter on stack level 1 a list containing a command name.

Press the USAG menu key. The calculator displays a screen with usage information for the command you specified in step 1.
(USAG works with flag -72 cleared. The messages will use your LANGUAGE configuration)

Example

Assuming that you transferred the USAG program to your HP 49/50, that you entered a list containing the COS command in level 1: « COS », and that you pressed USAG in the VAR menu, here's the screen you get:



This screen first tells you that COS is a function (all commands are either RPN/ALG commands or functions). Also, following the "(Function)" in your display (indicated here by "↓∂∫") there are three additional special function attribute characters: "↓" which indicates the function has an inverse, "∂" which indicates the function has a derivative, and "∫" which indicates that you can integrate the function. These characters do not appear when the displayed command does not have the corresponding properties.

The second line of the screen, showing "#1 of 4", tells you that there are four possible combinations of argument types for COS, and that the first one is currently displayed. Like COS, some commands have only a few acceptable combinations of argument types; others may have many more.

The next several lines of the USAG screen show the argument types accepted by the command and their corresponding stack levels. For COS you are first shown that it can operate on a real number in level 1. COS takes just one argument, but for commands that require more, all the arguments are shown on their appropriate stack levels. Argument names match specific HP 49/50 object types. (The exceptions are "Any", which means that all object types are acceptable; "Symbolic," which means that the argument can be an algebraic, a global name, or a local name; and "Program/PICT").

The menu keys at the bottom of the screen enable you to cycle forward (NEXT) and backward (PREV) through the argument type combinations. As you press NEXT and PREV, the second line of the display is updated, for instance, to "#2 of 4", then "#3 of 4", and so on. The calculator beeps when you step past

the last argument type combination (back to the first), or step backwards from first to last. When you want to exit the application, press [EVAL] to return to the normal stack display.
The available keys are:
[▶] like [NXT].
[◀] like [PREV].
[HIST] about USAG.
[ON] exits the application like [EVAL].

The [PRG] key prints all of the argument combinations to the current printer port. (Available only for 49G)

If you use USAG to check the usage of a command that takes no arguments or has just one argument combination, the USAG menu labels don't appear, and the display disappears at the next keystroke.

USAG operation depends on a common structure shared by most HP49/50 and library commands. If a command deviates from the common structure, USAG displays may be incomplete. For example, USAG applied to →Q shows only the single argument "Any", which is not very helpful. In the great majority of cases, USAG will be accurate, but you may need to refer to the Advanced User's Reference Manual.