

# VPG v2.01

## (General Purpose Viewer)

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### I. OVERVIEW

- Displays any object on screen.
- Equations and units are shown in *textbook* format.
- GROBs are shown unmodified.
- Other objects (except for programs, lists, IDs and XLIBs) are first converted to GROBs.
- Allows the combination of several objects in a list to build a document or to display results, etc. with ease.
- Scrolling is possible when data is larger than the screen size. The scrolling routine for the HP49G is not mine, it is written in assembler and it is called SCROLL.MAX. The one for the hp49g+/HP50g is mine and uses the whole display.
- By means of a program that returns an object (eg.: GROB) the displayed format can be customized.

Texto con formato  
**Esto va en letra tamaño mediano.**  
Volvemos a la letra pequeña. A continuación una línea horizontal.  
Entre las dos próximas líneas un espacio en blanco.  
XXXXXXXXXX  
YYYYYYYYY  
ZZZZZZZZ

### II. REQUIREMENTS

#### II.1. Hardware requirements

This program is written for the HP49G, hp49g+, HP50g or Emu48/Emu48+. In the hp49g+, HP50g and Emu48+ at least ROM 2.0 is required. It has been tested with ROM 1.19 (HP49G), 2.0 (hp49g+) and 2.15 (HP50g) and it should work with newer ROM versions.

#### II.2. Software requirements

No other software is required.

De todo un poco:  
[[ 1 2 ]  
[ 5 6 ]]  
2436

150  $\frac{M}{S}$

$\frac{x^2}{6} + 23 \cdot y$

$\frac{1}{4} \cdot x + 2$

GROB PERSONALIZADO

Esto es una pruebita. Seguidamente incluimos el contenido de la variable TXT

Esto es simplemente texto con retornos de línea, que se muestra en la forma habitual.



### III. INTEGRITY

#### III.1. Installation package

File: VPG.install.49prog.HP

Checksum: # 38817d

Bytes: 2331.5

### IV. INSTALLATION

#### IV.1. Installation

1. Transfer VPG.install.49prog.HP to the calculator.
2. Execute the program and choose installation port for the library.

#### IV.2. Uninstallation

1. Open file explorer (press the FILES key or type FILER and press ENTER).
2. Navigate to the port where the library is located, select it and erase it.

### V. DESCRIPTION

#### V.1. Commands description

<b>VPG</b>	Takes an object from level 1 and displays it. HP49G keys: A-F: adjust speed BACKSPACE: quit hp49g+/HP50g keys: CANCEL: quit
<b>VPGG</b>	Same as previous command, but instead of displaying, leaves the GROB in level 1.
<b>VPGA</b>	Converts the object in level 1 in self displayable, when EVALuated VPG is called.
<b>PlainView</b>	Shows object in level 1 without processing it. The object is preserved in the stack. This command is assigned to 61.31 by default. To quickly visualize an object press right shift hold + V.
<b>VGAdd</b>	Takes 2 GROBs from the stack and joins them. The one in level 1 is put below the one in level 2.

**HGAdd** Takes 2 GROBs from the stack and joins them. The one in level 1 is put to the right of the one in level 2.

#### V.2. Formats

- **IDs and XLIBs**  
Their contents is processed, if they do not exist they are converted to GROBs and displayed.
- **Programs**  
They are EVALuated; some object as result is expected in the stack. The program can take arguments or not, it can even do nothing at all. If the stack is left empty VPG adds an error message in the corresponding place.
- **GROBs**  
Displayed unmodified.
- **Equations and units**  
Displayed in *textbook* format.
- **Strings**  
Displayed honoring carriage returns. It is possible to manage the result behavior by means of control strings as discussed later.
- **Lists**  
Processed recursively. They must have at least one object. In case of an empty list VPG will insert an error message in its place.
- **Other objects**  
Converted to GROBs and displayed.

#### V.3. Control strings

The following strings are interpreted in a special way.

- **"\*R"**  
Puts next object in a box.
- **"\*B"**  
Inserts a horizontal white line.
- **"\*L"**  
Inserts a horizontal line.
- **"\*M"**  
Changes to FONT, by default MINIFONT is used.
- **"\*S"**  
Returns to MINIFONT.

This commands can also be inserted in the middle of a text, if followed and preceded by a carriage return. The two last commands also affect the size of equations, units, matrices, etc.



## VI. CHANGES

### VI.1. Version 2.01

- PlainView assigned to 61.31 key in \$CONFIG.

### VI.2. Version 2.0

- Conversion to hp49g+ (calculator model detection and scrolling routine for hp49g+).
- Display error when horizontal lines inserted in sublists fixed.

### VI.3. Version 1.3

- PlainView presented problems with a GROB inside a list (GROB was shown as string or low memory error was generated). This is fixed.
- PlainView puts each element of a list inside a box.
- Commands VGAdd and HGAdd added.
- Format option ``\*R`` added.

### VI.4. Version 1.2

- Conversion to HP49G. For HP48 use version 1.1.
- Library size reduced (AGROB no longer used in HP49G, not necessary to check its existence).
- Comand PlainView added.

### VI.5. Version 1.1

- Some bug fixes.

### VI.6. Version 1.0

- First version.

- You may modify it for your personal use. To distribute a modified version you have to notify me first.
- This documentation and all provided files should always be included in the package.

### VII.1. Final word

These program was written for personal use, and is published in the hope someone else finds it useful. I can't give support, sorry.

Comments and bugs: niko DOT uy AT vera DOT com DOT uy

Enjoy!

## VII. ACERCA DE

### I.1 Usage conditions

- I offer no guaranty or warranty of any kind for any damage this program may produce, so if you are doubtful backup your memory, your whole devices, or don't try it.
- This program is freeware and it cannot be sold.

