What’s new?

Continuous development of Emu10, Emu28, Emu42, Emu48, Emu71 and Virtual HP-IL devices
What's new at Emu10, 28, 42, 48, 71

All Emulators:
• PNG background image support
• speed improvement drawing button type 5 (transparent circle)

Emu42:
• fixed bug at HP42 "Load Object..." loading HP41 FOCAL programs
• improved HP42 "Save Object..." capabilities

Emu71:
• improved HP-IL device capabilities like Parallel Poll
Virtual HP-IL devices
ILVideo / ILVideo80

• ILVideo80, the simulation of the HP92198, had a very slow display output comparing to ILPer v2.3. (PLIST of Reversi with Emu71/Win full speed on ILPer < 1s vs. ILVideo80 v1.25 ~180s)

• After optimization ILVideo80 got 20-30 times faster comparing to v1.25 (Reversi PLIST in numbers: ~180s with v1.25, ~8s with v1.3)

• The ILVideo implementation as simulation of the HP82163 got the same speed upgrade
Searching for a virtual printer having a Roman8 character set I remembered my HP82240B printer simulation. ILBlinky is a weekend project combining the idea of a Virtual HP-IL printer device with the HP82240B printer simulation. ILBlinky receives data like a normal Virtual HP-IL printer device and sending the decoded data over UDP to the HP82240B printer simulation.

Because the HP41 is using a 7 bit character set incompatible with the HP82240B, ILBlinky got a simple method for character transliteration, far away from any complex translation of ESC sequences for example. More easily, use the HP82162A IL printer simulation in pyILPER.
ILBlinky with HP82240B
ILPilsim

- ILPilsim got an update allowing to modify the Virtual HP-IL settings without stopping the serial port redirection server
Emu41, Emu71/DOS, Emu75/DOS

Running them in an own environment with an external HP-IL device loop
Emu41, Emu71/DOS, Emu75/DOS

• Emulators for the HP-41, HP-71 and HP-75
• created by Jean-François Garnier
• have an interface to the HP82973A HP-IL Interface card and to the PIL-Box
• 16 bit DOS programs
• need a DOS Operating System (OS)
• run on Windows x86 OS (32 bit)
• incompatible with Windows x64 OS (64 bit)
Windows x64 OS (64 bit)

Needs a special Environment to run 16 bit DOS programs:

• DOSBox, an x86 emulator with DOS 
or
• Virtual Machine (VM) with an installed DOS
Emu71/DOS with ILPer
Virtual Machine (VM)

• A Virtual Machine is a software running on a Host simulating PC hardware. The Host is normally physical hardware running a recent OS like Windows 10, Linux or Mac OS.

• The VM itself is the hardware simulation with a BIOS only. Each VM needs an OS, the OS on the VM is called Guest OS.

• Many VM software have the possibility to redirect a simulated COM port to a server running on the host.
Oracle VirtualBox

• Basic package licensed under GPL
• Running on 32-bit and 64-bit Windows hosts
• Has Serial Port redirection to a Named Pipe or to a TCP/IP server on Windows
• Very fast comparing to VMware
VirtualBox and FreeDos

- VirtualBox [https://www.virtualbox.org/](https://www.virtualbox.org/)
- Tutorial creating a VirtualBox VM with FreeDOS
  [https://hp.giesselink.com/HPIL/virtualboxfromscratch.zip](https://hp.giesselink.com/HPIL/virtualboxfromscratch.zip)
VirtualBox Data Transfer

• Using a VHD (Virtual-Hard-Disk-Format) share like described in the virtualboxfromscratch.zip tutorial
• Adding DOS network support (I had no success to get this working)
• Using Floppy Disk images in IMG format
Something special, never seen before?
V41
The Windows HP-41 Emulator

A dream become truth.
V41 – Overview

• V41 is an emulator for emulating the HP41 hardware
• Maintained by Warren Furlow at hp41.org
• Native Windows program tested on Win98SE, WinXP SP3, Win7 x86/x64 and Win10 x64
• Supporting many modules over MOD files
• Import and Export of FOCAL Programs over Get/Put User Code menu entries
V41 – The Windows HP-41 Emulator

V41 Release 8E

V41 Release 9

1LB6-4001
V41 – The Windows HP-41 Emulator
V41 – The Windows HP-41 Emulator

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RELEASE 9 (10/22/2018)
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- Release 9 changes made by Christoph Giesselink
- Added Virtual HP-IL implementation
- Moved configuration settings from HKLM to HKCU
- Improved User Code by handling multi LBL programs in .RAW format files
- File overwrite question is now integrated in the SaveAs dialog
- Fixed problem at display read in connection with HP-IL
- Fixed client window size
- Fixed some Mcode Console related problems
- The small clicks at wave sound are more quiet now
- Includes several minor fixes
- Fix for compiling with VS2017
V41 – The Windows HP-41 Emulator

Where to get?

https://hp.giesselink.com/v41.htm

http://www.hp41.org
Thanks for your attention, any questions?