

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

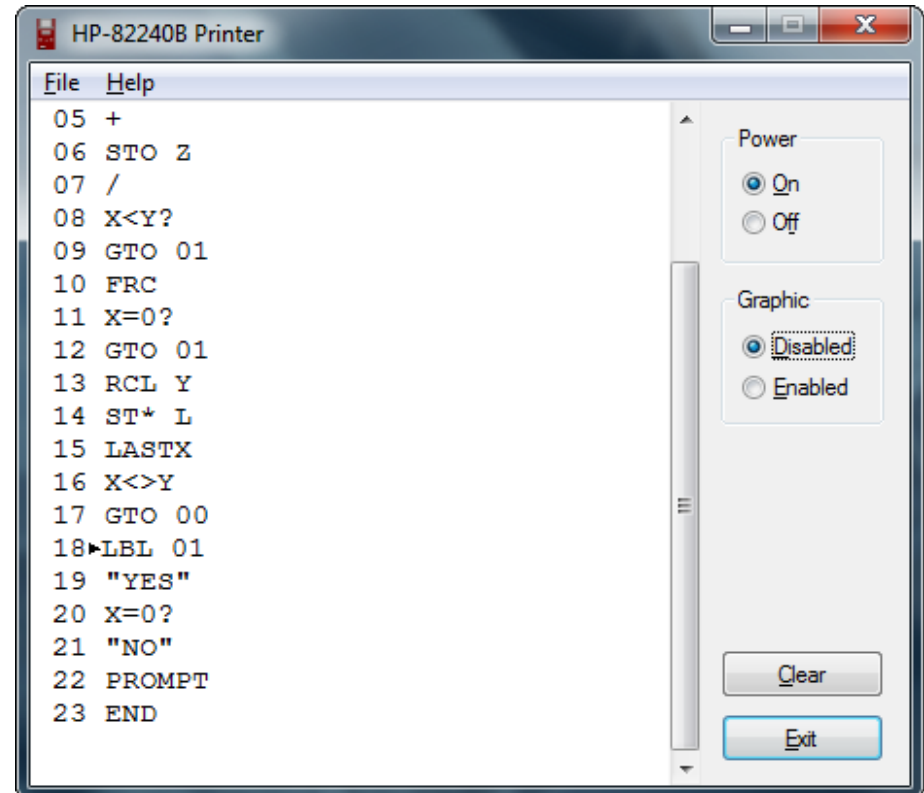
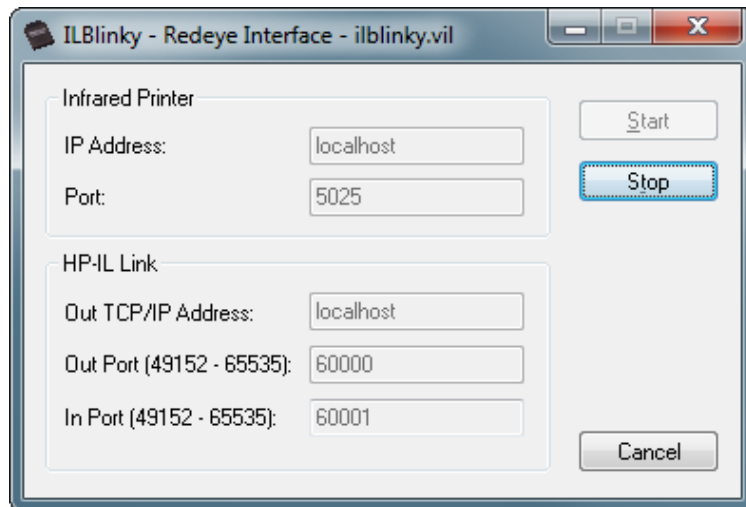
ILVideo / ILVideo80

- 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

ILBlinky

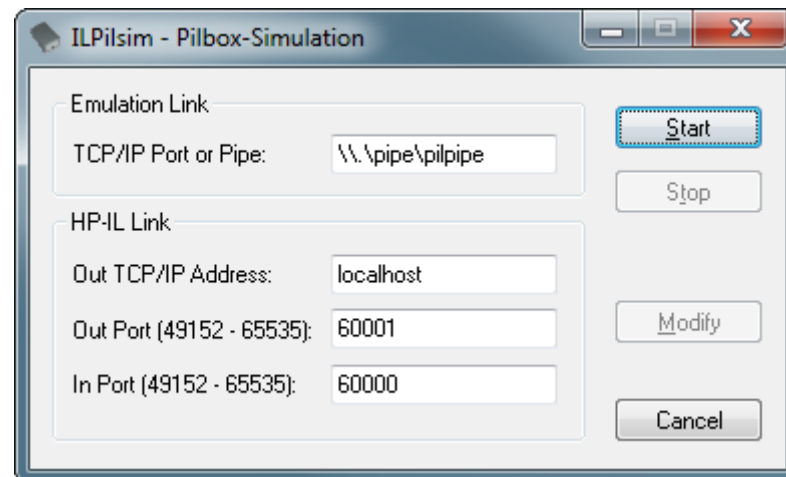
- Searching for a virtual printer having a Roman8 character set I remembered my HP82240B printer simulation. ILBlinky is a weekend project combining the idea of a Virtual HP-IL printer device with the HP82240B printer simulation. ILBlinky receives data like a normal Virtual HP-IL printer device and sending 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 pyLLPER.

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

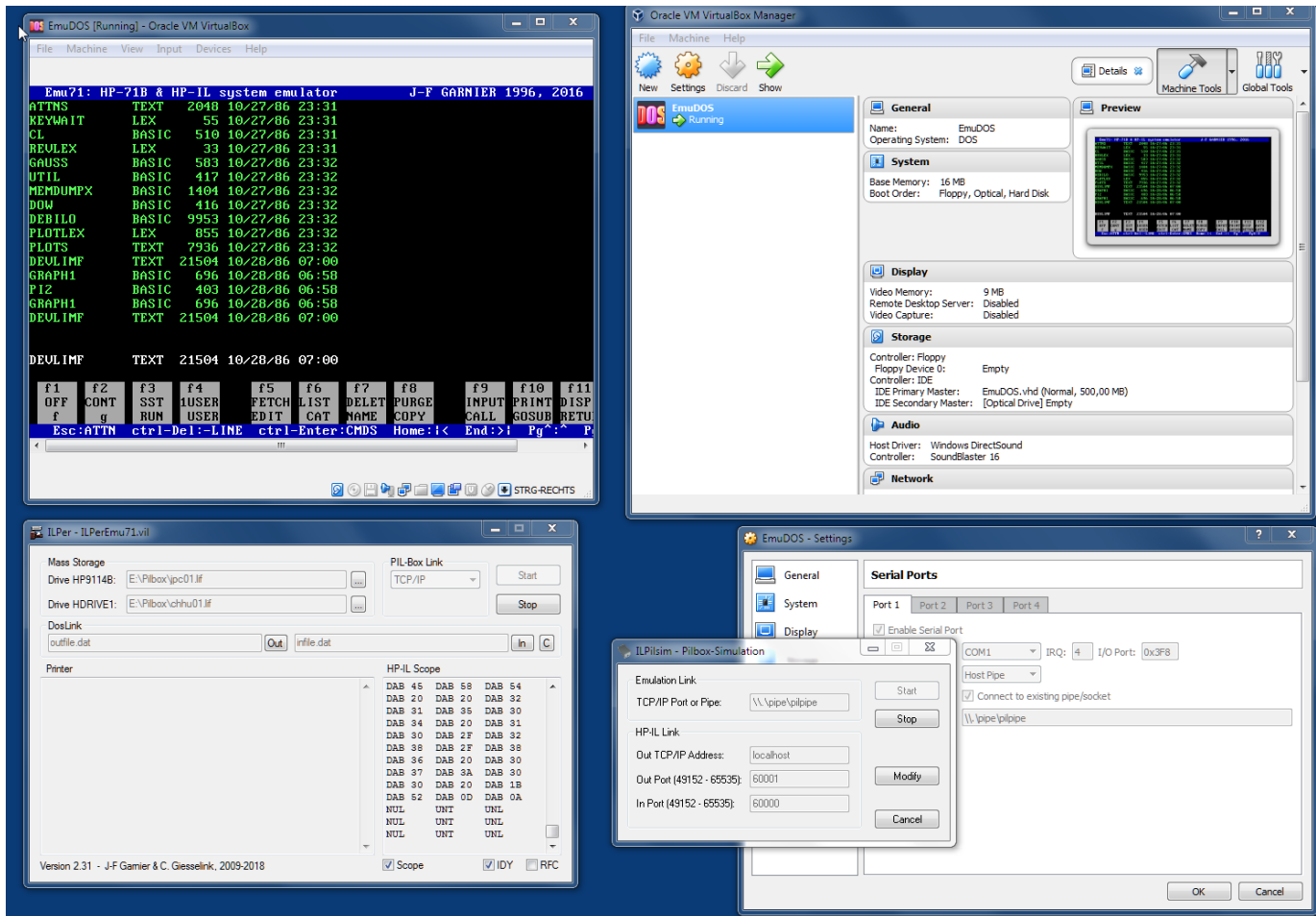
- Emulators for the HP-41, HP-71 and HP-75
- created by Jean-François Garnier
- have an interface to the HP82973A HP-IL Interface card and to the PIL-Box
- 16 bit DOS programs
- need a DOS Operating System (OS)
- run on Windows x86 OS (32 bit)
- incompatible with Windows x64 OS (64 bit)

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/>
- FreeDOS 1.2 <http://www.freedos.org/>
- Tutorial creating a VirtualBox VM with FreeDOS
<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

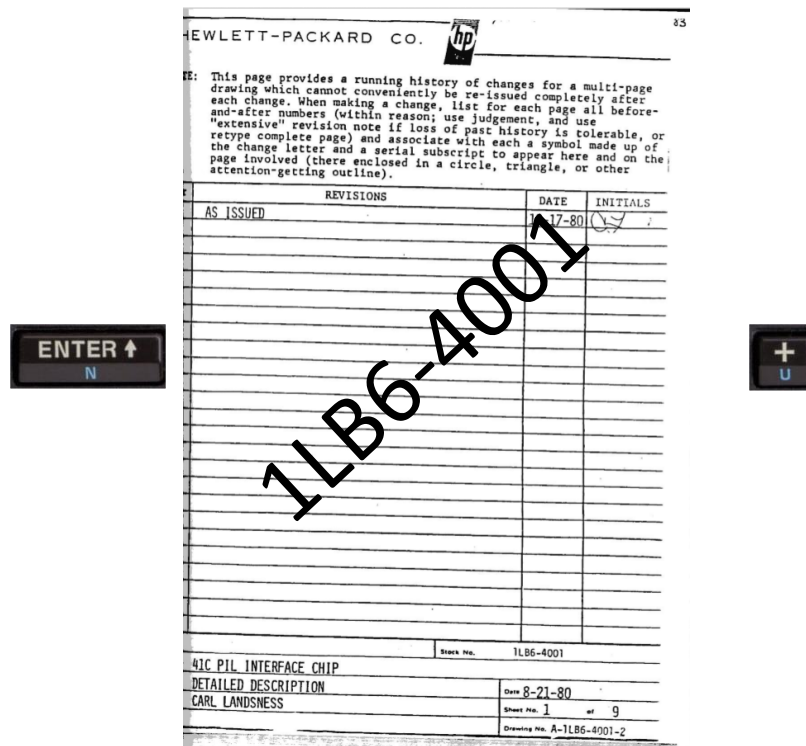
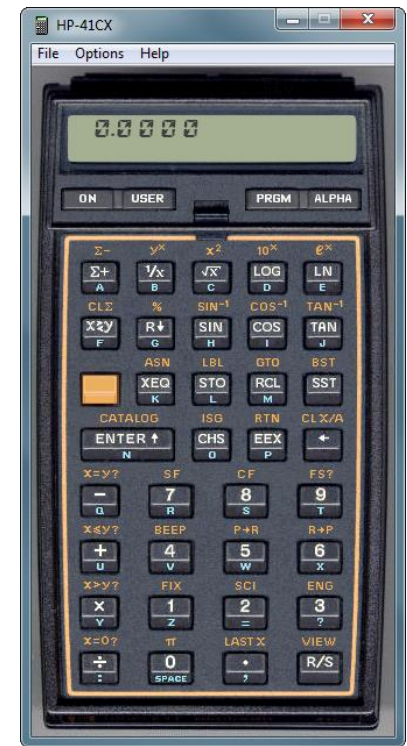
- V41 is an emulator for emulating the HP41 hardware
- Maintained by Warren Furlow at hp41.org
- Native Windows program tested on Win98SE, WinXP SP3, Win7 x86/x64 and Win10 x64
- Supporting many modules over MOD files
- Import and Export of FOCAL Programs over Get/Put User Code menu entries

V41 – The Windows HP-41 Emulator

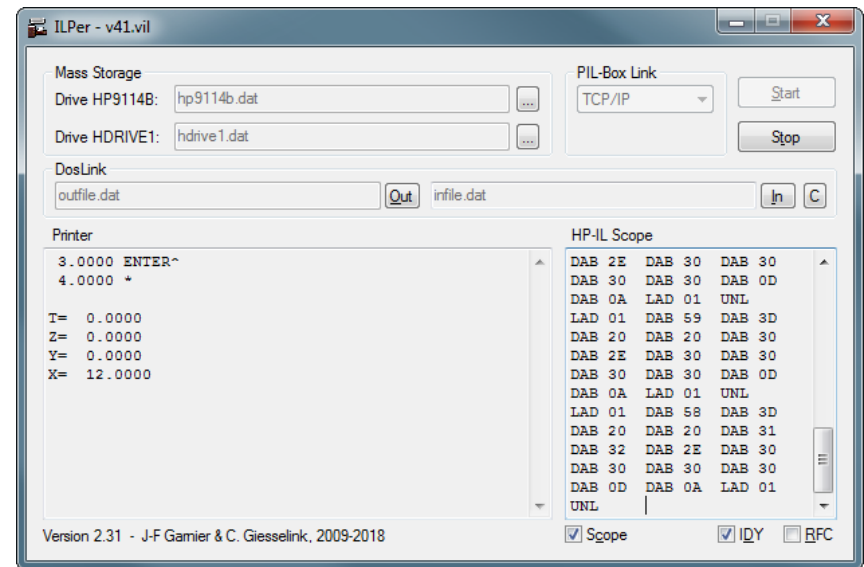
V41 Release 8E



V41 Release 9



V41 – The Windows HP-41 Emulator



V41 – The Windows HP-41 Emulator

RELEASE 9 (10/22/2018)

- 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?