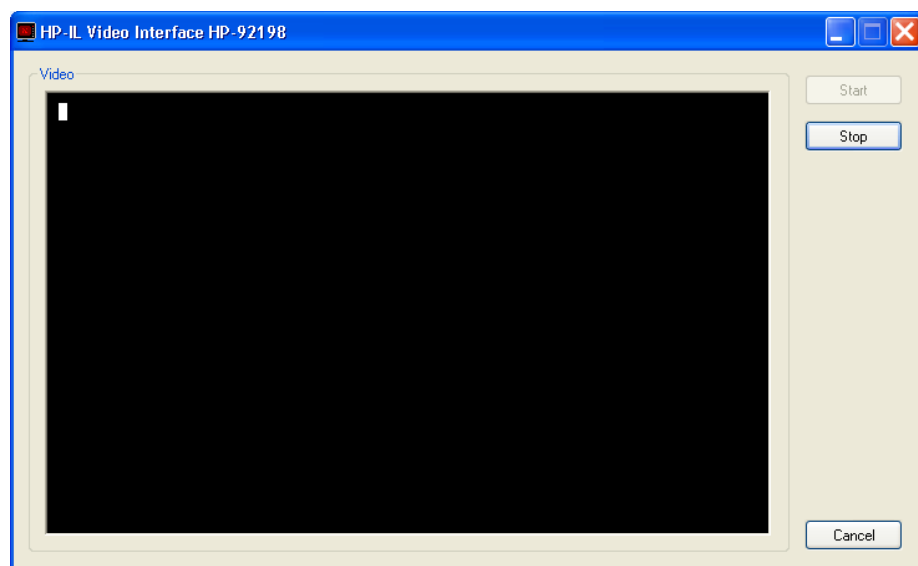# [ILVideo80 Manual](#)

General

ILVideo80 is a virtual HP-IL device simulating the HP 92198 - Series Video Interface (Mountain MC00701A) connected with a black and white, a green or an amber monitor.

<u>C</u>opy Screen

Copy the screen content as unicode text and as bitmap graphic to the clipboard. The non-printable characters are not shown in text mode.

<u>T</u>CP/IP Setup...

ILVideo80 has an integrated TCP/IP server for receiving HP-IL frames from the preceding device and a TCP/IP client to transmit IL frames to the next device. This implements a **virtual HP-IL** over a PC network.

Choosing TCP/IP (IPv4/IPv6) as transport protocol gives the advantage of communicating with virtual HP-IL devices around the world if the host PC has access to the internet. Each virtual HP-IL device contains a TCP/IP server listening for data frames on the specified port number and a TCP/IP client sending data frames to a port of the next virtual device. A HP-IL data frame is normally 11 bits long, but as TCP/IP is a byte oriented protocol it is mapped to 16 bits (2 bytes). The remaining upper five bits are filled with zero (reserved for future use). The two bytes of a frame are transferred in network byte order.

Therefore you have three virtual HP-IL mode parameters:

- *Out TCP/IP Address*

  The "Out TCP/IP Address" identifies the host PC with the next virtual HP-IL device. If the next device is on the same computer use "localhost" or "127.0.0.1" for IPv4 or "::1" for IPv6 as TCP/IP address, otherwise the DNS name or the TCP/IP address of the next computer. (A device may be a simulated device or an IL frame sniffer.)

- *Out Port (49152-65535)*

  The TCP/IP Port number represents in the simulation a physical HP-IL cable. It must have the same number as the "In Port" of the subsequent device on the virtual IL.

- *In Port (49152-65535)*

    Here you must enter the same number as on the "Out Port" of the previous device on the virtual IL.

So each device is listening for HP-IL frames on it's in-port, processes the frames inside the device simulation, and send output frames to it's out-port.

The Port numbers are split into three groups:

- Well-known ports: 0-1023
- Registered ports: 1024-49151
- Dynamic, private or ephemeral ports: 49152-65535

For virtual IL you should use port numbers from the third group (49152-65535). Port numbers below 49152 are also accepted.

Open TCP/IP ports are nowadays a security problem when your PC is connected to the Internet. To protect your computer from unauthorised requests all modern operating systems contain a (personal) firewall which blocks attacks. By default all ILVideo80 TCP/IP traffic is being blocked too. Depending on your firewall you are asked at first usage of ILVideo80 in TCP/IP mode to permit the communication or you must beforehand enable manually the ILVideo80 program in your firewall. For security reasons you should restrict the rights of ILVideo80 to the local PC or not more than to the local LAN.

To set the above mentioned virtual HP-IL mode parameters call the "TCP/IP Setup..." item in the ILVideo80 system menu (you get it by Alt+Space Bar or a left mouse click on the symbol in the top left corner or a right mouse click on the title bar). After you finished the setup, press the "Start" button please. If the "Start" button is disabled, the virtual HP-IL interface is already running. So you have to "Stop" and restart the interface for activating the new settings.

<u>M</u>onitor Type Setup...

To set a new monitor type call the "Monitor Type Setup..." item in the ILVideo80 system menu (you get it by Alt+Space Bar or a left mouse click on the symbol in the top left corner or a right mouse click on the title bar). You can choose between

- Black & White
- Green
- Amber
- Custom

monochrome monitors. For the Custom monitor type you can freely define the fore- and background color, the other three types have preset values.

<u>H</u>elp Topics...

Call this document.

<u>A</u>bout ILVideo80...

The version, copyright and license message.

Command line parameters

ILVideo80 can save the setup data in two ways. The standard way is saving the data in the Windows registry. But then every instance of the program starts with the same settings. To avoid this I added the possibility to use a dedicated ini-file.

- *ILVideo80 [setup-file] [/start]*

The command line arguments "*setup-file*" and "*/start*" are optional and their order is irrelevant.

- *setup-file*

  is the file (file name optionally with path) to hold the setup data of the program instance. The data is written to the file when you exit the program.

- */start*

  will activate the "Start" button automatically after program start-up.

Batch load example

A batch file containing

```
start ILPilbox.exe  /start ILPilbox.vil
start ILper.exe     /start ILPer1.vil
start ILper.exe     /start ILPer2.vil
start ILScope.exe   /start ILScope.vil
start ILVideo80.exe /start ILVideo80.vil
```

is starting one ILPilbox instance reading the setup data from file ILPilbox.vil, two instances of ILPer, one using the setup data from file ILPer1.vil, the other one from file ILPer2.vil, one instance of ILScope using the setup data from ILScope.vil and one instance of ILVideo80 taking the setup data from file ILVideo80.vil. At all five programs the "Start" button will be activated after start-up.

For the setup-files I suggest the file extension *.vil (for Virtual Interface Loop) but any other file extension will do. Creating the *.vil setup files from the example above is quite easy. Run the batch program to start all program instances, arrange the program windows on the screen and setup each program instance with the correct data. Finally close all program instances. At the next call of the batch file, all program instances are restored at the previous screen position and use the last setup data.

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