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1 Introduction

V-Control Remote PC is tiny software to control a PC programmatically. It is not comparable with VNC or Remote Desktop, and the desktop of the remote controlled PC is not exported to another PC. The software is useful if one need to control an application e.g. from a show control system. V-Control Remote PC receives commands via UDP or RS232 and execute these commands on the machine were it is installed. One often used purpose is to start Powerpoint and control the Powerpoint Slides by the show control system.

Via LaunchApplication command it is possible to execute any shell command and start an application or script (with optional parameters). One can send key down events as well as mouse move and mouse click commands (not on Mac OS X). With the correct commands it is possible to reboot or shutdown the PC.

To enable the remote control just click the Enable checkbox for the connection type you want. The Group ID is used to access individual PC when using Broadcast Commands.

Note: V-Control Remote PC starts always minimized. After the first launch click the program icon in the task bar and setup the remote connection. Then click “Save Settings” and “Minimize”.

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2 Integration in Show Control

To control V-Control Remote PC from a show control system, the UDP remote option is preferred. RS232 Remote is working as well with no limitations, except that you need one RS232 port for each controlled computer.

In the example below we show how to control a PC using V-Control and V-Control Remote PC. You can adapt the example to any show control system you prefer. The control protocol is already integrated in V-Control. To integrate the protocol in other show control systems, the remote control protocol is delivered with this manual.

Before we start we have to decide how we want to control the PC’s. Usually, V-Control need a separate control channel for each controlled device. So if we want to control five PC’s, we need five UDP channels. In that case we have to set a different UDP port on each V-Control Remote PC unit. A more elegant way is to use only one channel that is broadcasting the control commands to all controlled PC’s. To address individual PC’s, the group ID of each V-Control remote PC server has to be set to a unique value.

Note: A command send to group 0 is always executed, regardless of which group V-Control Remote PC is in.
2.1 Controlling PC's with separate channels

To control PC units with individual channels, the UDP port of each V-Control Remote PC server has to be set to unique value.

In V-Control, open the Channel editor (main menu Configure -> Channels...) and create five new channels, matching the IP addresses and udp ports of the V-Control Remote PC devices.
If that is done, create a new device using the main menu *Configure -> Devices...* menu.

![Device Setup](image)

Select the Device *V-ControlRemotePC* and click the *Add Device* button. If done, click the *Save Devices* Button. Click the new device *V-ControlRemotePC_1* in the device list and select the *Setup* tab. Select the five channels and click the *Add* button. If done, click the *Command* tab.

![Command Tab](image)

To send commands to the PC's select the channel of each PC you want to control. In this case, it is OK that all servers have the same group id, because a command that is sent through channel rpc1,rpc2 and rpc3 will not be received by rpc4 and rpc5.

The next chapter shows how to use V-Player units with broadcast commands.
2.2 Controlling PC's with one broadcast channel

A more elegant way to control a huge amount of PC's is to use broadcast commands. To do so, set the udp port of all V-ControlRemotePC servers to the same value (e.g. 10100). Then set for each server an individual group value. In this example, we have five PC's, so use the group id's 1,2,3,4 and 5.

In V-Control, we only have to create one channel that uses a broadcast address. The broadcast address is 255.255.255.255 (see below)

To send a command to player 1,2 and 3, we only have to enter their group id's as comma separated list in the Group field.
3 Remote Control Protocol

To control V-ControlRemotePC by a media control system like V-Control or Medialon, a plain, easy to use ASCII protocol is implemented. The command string is composed as follows:

Group<2>Command<2>Parameter<CR>

**Group:**

Each server is a member of at least one group, the group 0. A command sent to the group 0 is accepted by all servers in the network. To make PC's individual accessible, you can add them to an extra group, e.g. 1. A command sent to units with the group 1 is only accepted by V-ControlRemotePC servers in that particular group. However, a command sent to group 0 is also accepted by units with a group > 0. To send a command to PC's that are members of different groups, just send a comma separated list with group IDs (e.g. 1,2,34,56,57). You can use an unlimited number of groups, and depending what you want to do it can be useful to give every V-Control Remote PC an individual group ID.

**Command:**

The command that is sent to the player (i.e. SendKeys)

**Parameter:**

Some commands need a parameter to work properly

<2>:

send the ASCII code 2 as separator for the command parts. **Note:** It is not allowed to send this as string, e.g. "2" or "02". You have to send the separator as binary value. The correct function in a Basic program will be chrB(2).

<CR>:

ASCII Code 13 (Return / Enter key)

**SendKeys:**

The command sendkeys send a keypress event to the application that has the focus. (Not available for Mac OS X)

Group<2>SendKeys<2>Modifier+Key<13>

**Example:**

```
0<2>SendKeys<2>A<13>       Send the Key "A"
0<2>SendKeys<2>+a<13>      Send the Key SHIFT+a
0<2>SendKeys<2>+a<13>      Send the Key CTRL+a
0<2>SendKeys<2>%a<13>      Send the Key ALT+a
```
0<2>SendKeys<2>{F1}<13> Send the Key F1
0<2>SendKeys<2>{F2}<13> Send the Key CTRL+F2
0<2>SendKeys<2>{BACKSPACE}<13> Send the Key CTRL+Backspace
0<2>SendKeys<2>{DELETE}<13> Send the Key DELETE

Other allowed parameter values:
;BREAK;CAPSLOCK;DELETE;DOWN;END;ENTER;ESC;HELP;HOME;INSERT;LEFT;NUMLOCK;PGDN;PGUP;PRTSC;RIGHT;SCROLLLOCK;TAB;UP

LaunchApp:

Group<2>LaunchApp<2>PathToFile<13>

Example: 0<2>LaunchApp<2>C:\programmfiles\msoffice\word.exe<13>

KillApp:

(Not available for Mac OS X)

Group<2>KillApp<2>appname<13>

Example: 0<2>KillApp<2>word.exe<13>

MouseMove:

(Not available for Mac OS X)

Group<2>mousemove<2>x y<13>

Example: 0<2>mousemove<2>100 345<13>

MouseClick:

(Not available for Mac OS X)

Group<2>mouseclick<2>mousekey<13>

Example:
0<2>mouseclick<2>left<13>
0<2>mouseclick<2>right<13>

IsAlive:
Use this command to check if the computer is available

Group<2>IsAlive<2><13>

Example:

0<2>IsAlive<2><13>

returns "living" if computer is powered on and network available
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