542 Lite Commander application

User's guide

Solidyne SRL

The 542 Lite Commander allows you to control the 542apc from a PC running on the LAN, it is easy to configure and allows you to automate tasks such as selection of processing preset and FM transmission mode.

It is an application for Windows compatible with the editions XP, Vista, Seven, 8.0, 8.1 and Windows 10. It also runs on Windows server editions. It can run on both 32-bit and 64-bit operating systems.

We advise you to read this manual carefully to extract the maximum performance from the equipment.

Installation

For your convenience an installer is provided in case the user wants to leave their autoboot configured from the Windows start menu or leave a quick access icon on the Windows desktop. It is also possible to copy the executable to a particular folder and run it from there in case the user lost the installer.

It does not require supervisor permissions to run.

The application folder by default is: *C:\Program Files (x86)\Solidyne 542 Lite commander*.
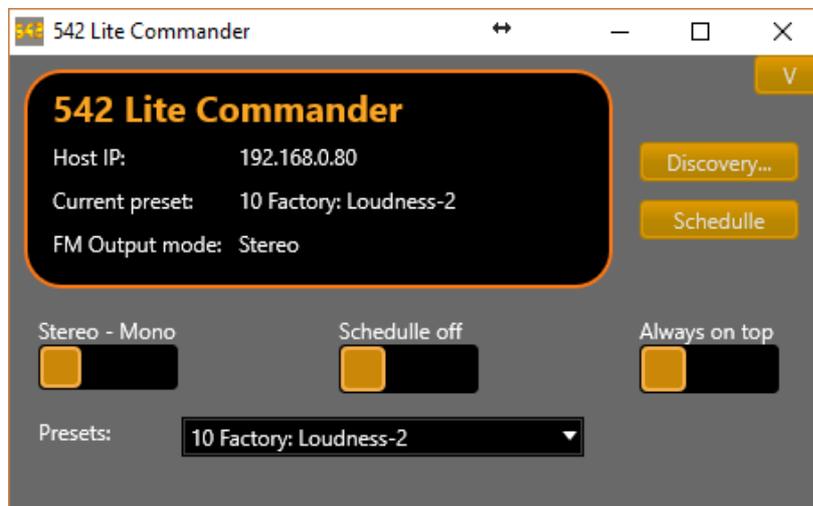
The data folder is: *<appData>\Solidyne*, for example: *C:\Users\User\AppData\Roaming\Solidyne*

The application uses port 30303 for 'Discovery' services (to locate the computers available on the network) and port 80 to command the selected equipment.

The application is designed to command a single device at a time, several instances can be executed if it is desired to command a second unit.

> Discovery UDP port: 30303   Application TCP port: 80   TCP Time out default: 1000ms

Main window

The main screen displays the selected device (Host IP), the current preset, and the FM transmission mode (mono or stereo).
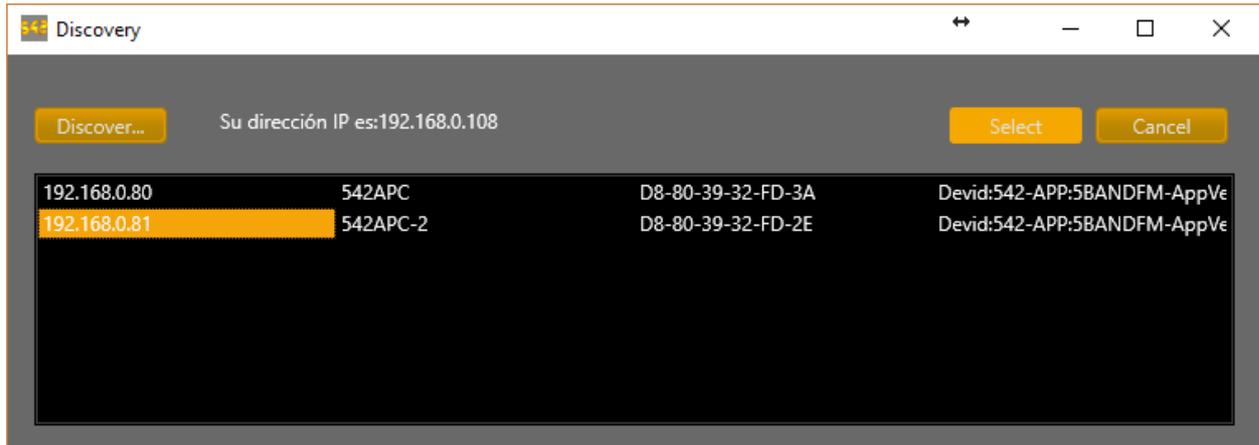
The Stereo-Mono switch also shows the status of the stereo/mono transmission and can be changed by click on it. On-screen control then allows operators to quickly switch to MONO mode during news programs to increase news coverage and avoid interference.

The [Discovery] and [Schedule] buttons allow you to access the Discovery screens and preset scheduler editor by time band.

The 'Schedule' button switches on/off the schedule mode. When the schedule mode is on, the preset and the transmission mode (mono/stereo) can be changed by a timetable.

The 'Always on top' switch allows the application to be visible even if another application, such as the audio automator, is chosen to work. In this way it is possible to always display the selected preset and the stereo or mono transmission mode. When the processing preset or the FM mode changes remotely, eg: from the hardware, the application reflects the change in its status panel.

Discovery

When the 'Discovery' screen is opened, the software searches the 542 device on the LAN sending a broadcast message. If the unit was turned off it is possible to repeat the search by pressing the [Discovery] button again. The devices found will be displayed in the result list box detailing the IP address, host name, MAC address and details of the device.

A device must be selected from the list and press [Select] so that the software starts to command the device. The window also reports the IP address of the computer as it will help to the user to know if the device is in a subnet.

The processor is controlled via IP, so it is recommended to set the processor with a fixed IP. The IP of the selected unit is saved in the software configuration file, V-RACK.INI, for later use in case of system restart.

Switch Stereo/Mono

The switch Stereo-Mono switch and show the transmission mode stereo/mono. It changes just clicking. Mono transmission improves the FM range, significantly reducing interference with other radios and multipath distortion. The improvement in the coverage area is equivalent to multiplying the effective power transmitted by four (see the 542APC documentation for more details).

The manual switching is no the only way to change the transmission mode. The options are:

- Manually from the screen control. The operator can switch quickly to MONO during news, magazines or sports shows.

- According to the time schedule.

- By change of preset. The presets have an attribute to switch the Mono / Stereo transmission mode. When a preset with the MONO attribute active is turned on, the processor switches to MONO mode until a new preset change occurs.

- When the microphones are on the air. As in the previous case, the switching is done by the preset change. In this case, the GPI is used to activate the preset for "VOICES", which will have the "MONO" mode active.
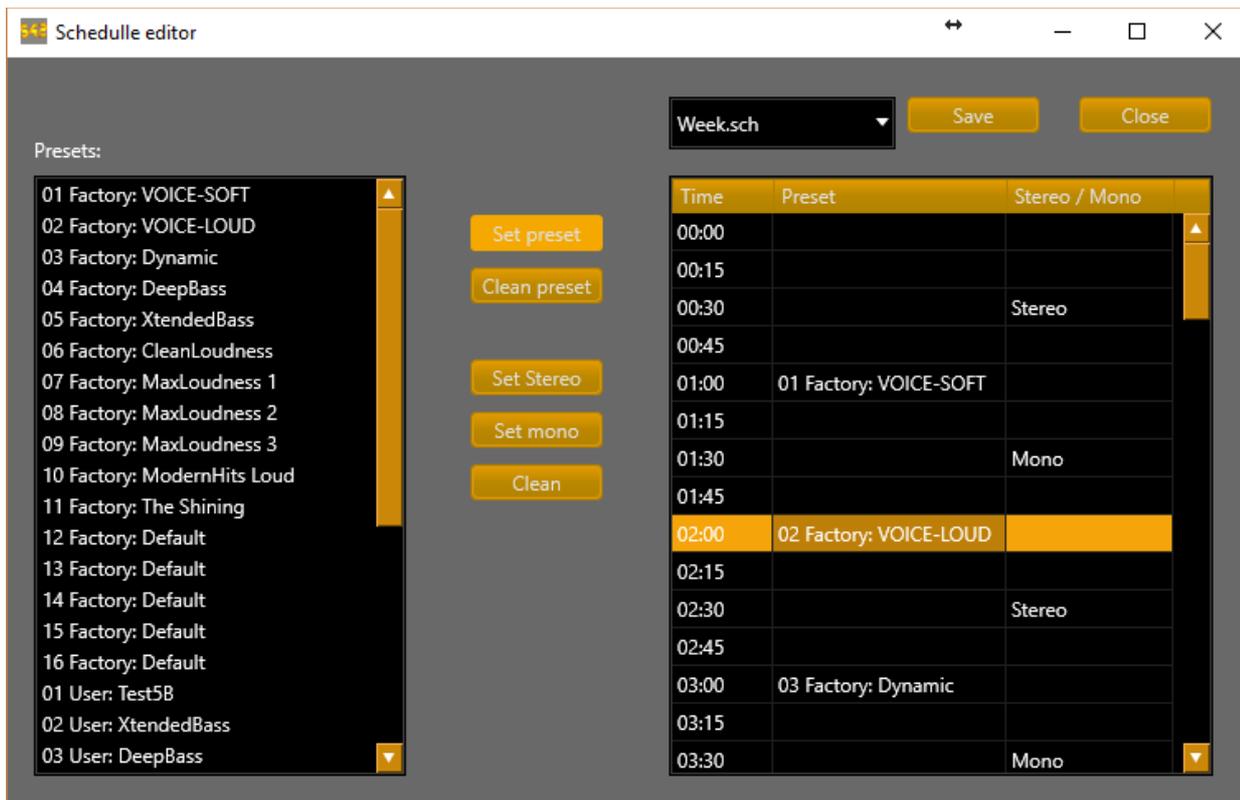
For how to switch the preset to GPI, see the 542 APC User's Manual.

Schedule editor

The "Schedule" window allows you to define the preset and the transmission mode that is applied according to the day of the week and the time.

You can define a template for the days from Monday to Friday, one for Saturdays and another for Sundays. The file 'Week.sch' will be used from Monday to Friday, while the files Saturday.sch and Sunday.sch will be used on Saturday and Sunday respectively. The programming of presets and transmission modes are saved in one of those files.

The schedule is divided into regular segments of 15 minutes. When a preset value is entered in a field, that preset will be active only during that 15-minute interval. In the blank fields LiteCommander does not change the preset or the mode, returning to the previous preset (or mode) that the user defined in the processor settings (using the Web Control Panel).

On the left, all available processing presets are listed. To program a preset change, proceed as follows:

1. Select the day for which the change will be scheduled (Monday to Friday, Saturdays or Sundays)

2. Select a preset from the list on the left.

3. Select a time segment in the agenda on the right.

4. Press the [Set preset] button. The preset will be loaded in that interval. When the moment arrives, the preset change command is sent, which will remain active only during that 15 minute interval.

   Note: To generate a preset change for one hour, the preset must be entered in 4 consecutive intervals. For example: if you want to switch to preset "08: MaxLoudness 2" from 12: a.m. to 1:00 p.m.; this preset must be loaded in the fields 12:00; 12:15; 12:30 and 12:45.

Proceed similarly with Stereo/Mono transmission mode. In each interval the stereo/mono column mode is switched using the buttons **"Set stereo"** and **"Set mono"**.

It is possible to eliminate the setting of a preset by selecting it and pressing the **[Clean preset]** button. The same with the stereo / mono broadcast mode using the **[Clean]** button.

When and why broadcast in FM mono?

The propagation studies of the FM transmission show that better coverage and less multipath distortion is achieved when transmitting in mono, so in cities with a lot of congestion in the spectrum, where medium and low power radios can suffer interference, a solution to improve the coverage without increasing the power of the transmitter is to transmit in mono, at certain moments of the programming. Programs with a predominance of voices, such as newscasts, talk shows, sports broadcasts and any program based on the use of microphones, are not relevant to stereo transmission. And use FM-stereo transmission during music programs.

The transmission in mono is more immune to interferences among them those caused by pirate radios that dirty the transmission spectrum. For more information, see the tutorial on audio processors at www.SolidynePro.com, or refer to the Solidyne 542APC processor user manual.