

DP-502 User's Guide

This DP-502 (the 'device') based system allows multiple devices to connect to a server and automatically update audio contents on a daily basis. The device is loaded with up to 13 sound files (1 'generic' plus 12 months) and loop-plays the generic file and the current month file alternately. Every day at a specific time the device will try to connect with the server and download updates if there's any. If errors should occur during the connection the server will put an indication on the screen to alert the user. In addition to the scheduled connection time, the device also tries to connect upon power up. This allows updates to be downloaded and become effective immediately, although manual operation (power cycling the device) is required.

Devices may be assigned to different groups (if necessary) to take advantage of group default settings. Each group has its own server (which can be shared with other groups) and set of default sound files. When a device is assigned to a group it automatically gets the group default settings, making it easy to set up. When a group default setting is changed all devices in the group automatically gets the change, making it easy to change. However, a device does not need to use all group default settings. It may have some settings changed to its own. For example, it may have a generic message different from other devices in the same group, or it may have a different connection time so that all devices do not try to connect at the same time.

Device configuration data such as server IP address, connection time and set of sound files are stored on an SD card. The card is programmed on the server and then moved to the device. Afterwards, changes can be made by either swapping cards (if network connection is unavailable) or letting the device do the automatic daily update.

Hardware Descriptions

There are two push buttons on the top of the unit. The Monitor button turns the internal speaker on and off, but does not affect the operation in any other ways. The other button is useless. On the back side from left to right, there is a speaker volume dial with power switch, a power jack, a 1/8" mono phone jack for audio output, a RJ-11 telephone jack (useless), a USB port (useless), an SD card slot, and a RJ-45 Ethernet connector.

- The audio output is low power and not meant to drive speakers directly.
- The device accepts SD and SDHC cards of up to 32GB.
- Both WAV and MP3 files are supported.

Software Installation

Run "DP-502 Setup.exe" on the CD to install the DP-502 software on a PC that's to become the 24/7 server where every associated DP-502 unit will download new contents from on a daily basis.

Restart Windows after software installation. From now on a server program called "DP 502 Server US" will start to run automatically upon power up, but you can always manually stop it at any time. Note that when the server program is stopped, DP-502 units will not be able to get updates from the server.



This icon on the task bar indicates that the server program is up and running. You can see the current server status by clicking the icon. To stop running the server program, right click on this icon and select "Close window".



This icon on the desktop is a shortcut for the console program. The console program allows the user to configure both the server and the devices (such as IP address, connection time and sound files), as well as program the SD card for use in the device initially.

ETM 3.0

A utility program called ETM 3.0 also needs to be installed by running "ETM 3.0 Setup.exe" on the CD. A shortcut will be created but this program will not run automatically upon power up. It is used to find devices connected to an LAN. This program can work within a LAN only, not over the Internet. Therefore it needs to be installed on a PC that's on the same LAN as the target device.

When ETM 3.0 is installed a program called WinPcap 4.1.2 is also installed. Do not remove WinPcap 4.1.2 otherwise ETM 3.0 will not work.

| | |
|--|--|
| Administration | |
| User Name | <input type="text" value="dp502"/> |
| Password | <input type="password" value="****"/> |
| LAN | |
| DHCP Client | <input type="text" value="Enable"/> |
| Internet Service | |
| HTTP Server/Port | <input type="text" value="80"/> |
| Sync Time with PC | |
| <input type="button" value="Computer Time 2014/4/22 14:47:58 Sync to Device"/> | |
| NTP (Network Time Protocol) | |
| NTP Server | <input type="text" value="Disable"/> |
| Time Zone | <input type="text" value="(GMT-08:00) Pacific Time (US & Canada), Tijuana"/> |
| Update software | |
| Server | <input type="text"/> |
| Port | <input type="text"/> |
| <input type="button" value="Update"/> | |
| <input type="button" value="OK"/> | |

User Name & Password

You may change them if you like.

DHCP Client

Better keep it enabled unless you know what you are doing.

Internet Service

Better keep it unchanged unless you know what you are doing.

Sync Time with PC

Press the button if you want to sync the device's internal clock with the connected PC (not necessarily the server). If you are configuring the device for a different time zone then this will do no good.

NTP (Network Time Protocol)

There are many NTP servers on the Internet that broadcast current date and time information. It's better to enable NTP server so that the device can get the information and always keep its clock accurate. You may select any NTP server on the list (it doesn't really matter) or define your own.

Time Zone

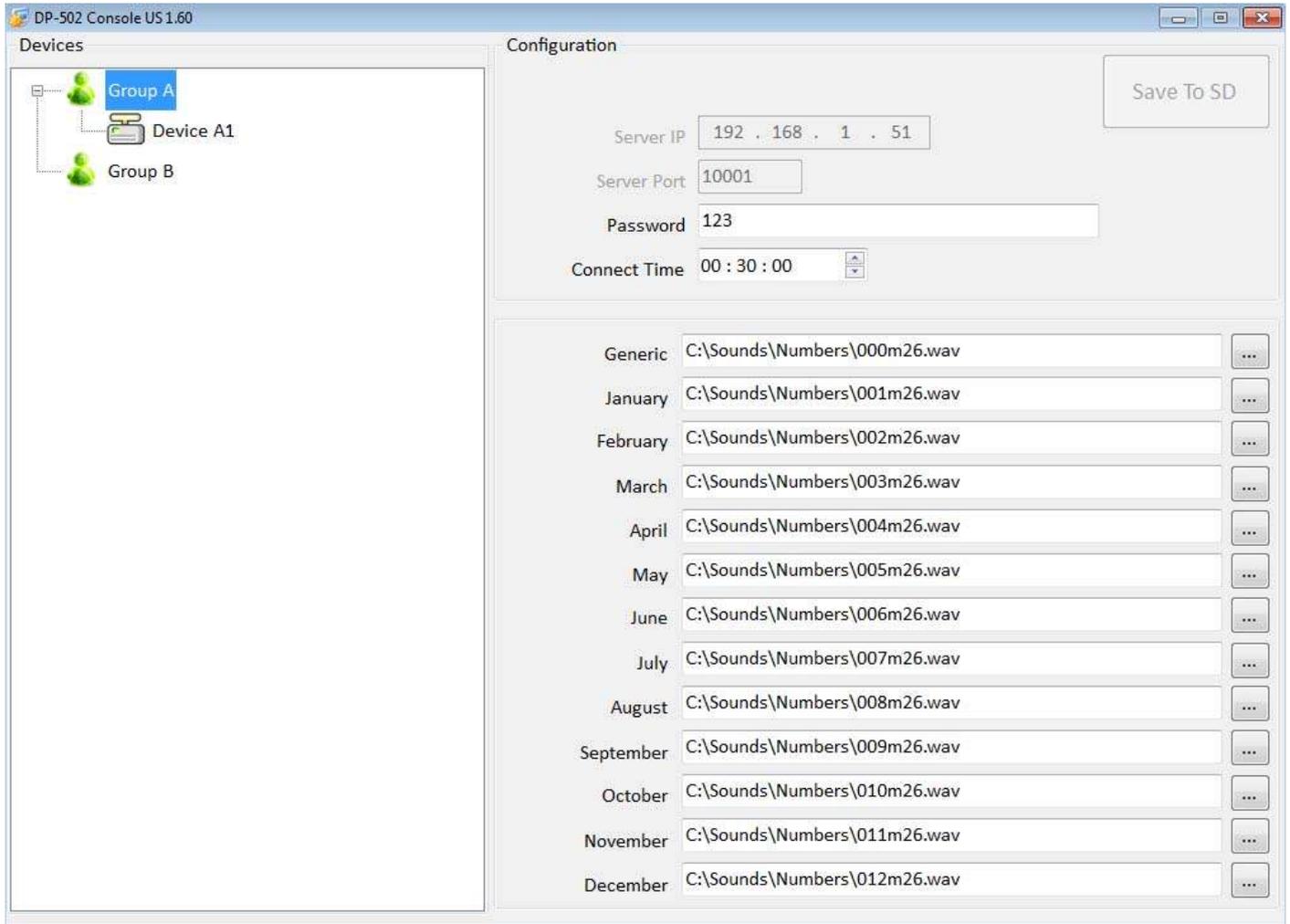
Select the time zone that the device will be working in. Note that Daylight Saving Time is not adjusted automatically so someone has to manually do it by shifting the time zone up and down by one hour.

Update Software

Someday you may be able to have the device's firmware, when necessary, updated remotely.

The Group Window

The Group Window, which opens right after the console program is executed, looks like this:



In this example, two groups (Group A, Group B) and one device (Device A1) have been set up.

- To add a new group: right click anywhere in the left pane, select Add Group.
- To rename/delete a group: select/highlight the group, right click, select Rename/Delete Group.
- To add a new device under a group: select/highlight the group, right click, select Add Device.
- To rename/delete a device: select/highlight the device, right click, select Rename/Delete Group.

The configuration data shown in the window is for Group A which is the selected (highlighted) item. Any changes to the configuration data will be automatically applied to all devices belong to that group, with some exceptions that will be explained in the Device Window section.

The Save To SD button is grayed out because it does not apply to group configuration.

The Server IP and the Server Port are both grayed out, but they can be changed by right click anywhere in the left pane and select Set Server IP and Port.

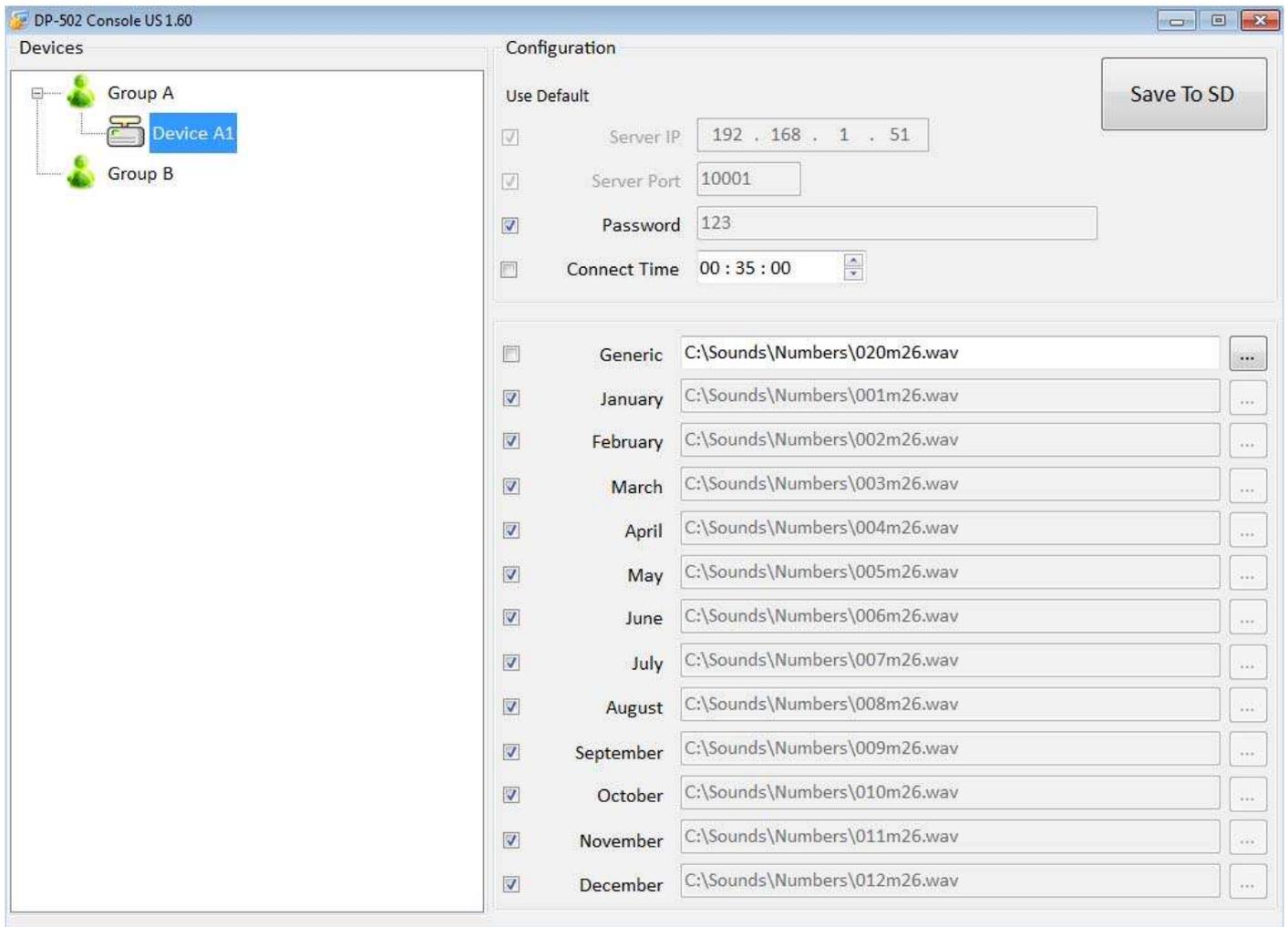
A correct password is required for the device to get updates from the server. When the password is changed here the server would still remember the old one, so that devices with the old password can get through when they try to connect for the first time after the password has been changed.

If there are many devices to be served by the same server, it is better to stagger the Connect Time in order to avoid network congestion.

For loading sound files you may either enter their paths directly, or click the [...] button to open a navigation window.

The Device Window

The Device Window, which opens when a device is selected, looks like this:



In this example, the Use Default box has been unchecked for Connect Time and Generic, and both items have a different value than the group default. This is how a device configuration item can be set different from the group default. If the Use Default box is checked again, the item will automatically be restored to the group default.

After the device configuration has been set up properly, attach an SD card (via a card reader) to the PC and click the Save To SD button on the upper right corner. After the SD card is written, remove it from the PC and insert it into the device. The device is now ready to work!