ACCESSIBILITY GUIDE FOR PEOPLE WITH HEARING WEAKNESS IN ENVIRONMENT MAC OS X SNOW LEOPARD

MAC OS X Snow Leopard offers some support for people hearing problems for they can quickly set sound options that there are in the some multimedia applications such as QuickTime, iTunes, another’s. This operating system also provides alarms by flashes on the screen.

Here are points to be discussed in this guide:

1. Previous recommendations about the use of keyboard
2. Basic configuration of alerts and sounds on screen
   2.1 Sound basic settings
      2.1.1 Sound effects settings
      2.1.2 Setting the audio output devices
      2.1.3 Setting the audio input devices
3. Configuring accessibility options for multimedia applications
   3.1 Accessibility settings for iTunes
   3.2 Add subtitles to multimedia files
1. **Previous recommendations about the use of keyboard**

If you do not have a Mac keyboard, you can use a Windows keyboard for this operating system. Equivalent keys are:

<table>
<thead>
<tr>
<th>Windows key</th>
<th>Mac key</th>
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</thead>
<tbody>
<tr>
<td>1</td>
<td>Alt</td>
</tr>
<tr>
<td>2</td>
<td>Start(📸)</td>
</tr>
<tr>
<td>3</td>
<td>Shift</td>
</tr>
<tr>
<td>4</td>
<td>Control</td>
</tr>
<tr>
<td>5</td>
<td>Bloq Num</td>
</tr>
<tr>
<td>6</td>
<td>Bloq Mayús</td>
</tr>
<tr>
<td>7</td>
<td>Esc ( escape )</td>
</tr>
<tr>
<td>8</td>
<td>Impr Screen</td>
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<td></td>
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2. **Basic configuration of alerts and sounds on screen**

If you are deaf or you have difficulty to hear sounds emitted by the system, you can quickly set sound options of the **Universal Access** panel. For this, follow these steps:

- Click on **Apple menu 🍎** and then click on **System Preferences. 📖**
- In the bottom right click on **Universal Access. 🌐**
- Select **Hearing**. (See Picture 1).
When you do not hear a warning, check “Flash the screen when an alert sound occurs”. (See Picture 1).

To check the type of flashing for alerts, click on the button Flash Screen.

If you have problems with one ear, you can check the box “Play Stereo audio as mono” and so you can hear the sounds of a single handset (if using speakers is not necessary to activate this box.)

In addition you can set the volume by clicking on the button Adjust Volume... (See Picture 1).
2.1 Sound basic settings

If you have trouble hearing the system sounds, you can set system sounds to adjust your needs. For this follow these steps:

2.1.1 Sound Effects Settings

You can select the environment in which they can make sound (speakers, headphones, etc ...) to reproduce the effects that the system emits. For this, click on the hearing panel and click on the button **Adjust volume** (See Picture 1) and select the device type drop-down menu **“Play sounds effects through:”** (See Picture 2). You can also choose the type of effect that you want to play and adjust both the volume of effect such as audio output device, enable or disable options such as special sound reproduction (Front Row), making a sound when changing volume and reproduce the sounds of the user interface. (See the Picture 2).

![Sound Effects Settings](image-url)
2.1.2 Setting the audio output devices

With this option you can select the output device (speakers, headphones, etc) and adjust the volume it. You can also choose the sound balance between headset or speaker right - left. (See the Picture 3).

- Picture 3 -

2.1.3 Setting the audio input devices

With this option you can adjust the microphone volume or other audio input devices that are connected to the computer. (See the Picture 4).
3. Configuring accessibility options for multimedia applications

3.1 Accessibility settings for iTunes

To configure subtitles in iTunes, you need to follow these steps:

- Open the application by clicking the icon on your desktop (See Picture 5).

- In the top menu click on iTunes and then Preferences (See Picture 6).
- Click on the Playback tab and then check "Show closed captioning when available". (See Picture 7).

- In addition you can also change the subtitle language and audio, for that, expand the list of languages that exist in the options Audio language and Subtitles Language. (See also Picture 7).
3.2 Add subtitles for multimedia files

To add subtitles and play them in iTunes or QuickTime, you will need an additional program called Submerge. To obtain one can enter the following link (See Picture 8):

http://www.bitfield.se/submerge/index.html

After downloading the program, follow these steps:
- You must run the application Submerge and for this, go to the **Downloads window** (which was run by downloading the program) and click on **Submerge**. (See Picture 9).

  ![Downloads window](image)

  - Picture 9-

- If you closed it, you can go to the download icon located on the desktop, right click it and select **Submerge**. (See Picture 10).

  ![Download icon on desktop](image)

  - Picture 10-
Choose Open from the File menu. You can also use keys **Command + O** (See Picture 11).

- Picture 11-

Locate and **select the file** to which you want to add subtitles. Then click on the button **Open**. (See Picture 12).

- Picture 12-
• Click on **Choose** of the toolbar (See Picture 13).

- Picture 13-

• Select the subtitle file `.srt` for the file selected and then click **Open**. (See also Picture 12).

• Then a box load as follows (See Picture 14) and wait until it finishes.

- Picture 14-

You can now check that the file has subtitles.

Once you have verified that the video contains subtitles is selected, the following steps will be of the same configuration. For this follow these indications:
• Click on the button **Settings** of the toolbar. (See Picture 15).

![Subtitles settings](image15)

- Picture 15-

• A box appears for you to customize the subtitles. In it you can change the font size, color, and speed in which they appear. It is recommended that the drop-down, leave the default option “Guess”. (See Picture 16).

![Subtitle options](image16)

- Picture 16-
Now you can play media files using subtitles but with Submerge player. To activate this option in iTunes, you just follow these steps:

- After selecting the file press keys **Command + S** to save the file with subtitles.
- Give a name for the file containing subtitles, and then click on **Save**.
- Then a window appears similar to that shown in Picture 14. (Wait until you finish).

You can now use iTunes as a player of files with accessibility (converted with Submerge).