

It is pretty noticeable that many of our films suffer from problems caused by bad sound. Many a budding filmmaker thinks that having an excellent steady footage matched with good exposure and colour will make the film irresistible. It is commonly assumed that 40% of the quality of the finished film is determined by the captured footage, a further 40% is due to editing and the rest is due to the audio content. Well, not so. The general consensus amongst the professionals is that about 70% of the “viewability” of the film is determined by the quality of the sound and only 30% belongs to snappy editing and titles. Audiences in general can tolerate some degree of softness, some wobbly and snatched shots but there is one thing in common, all have excellent sound production.

There are many common mistakes that make the sound track less than enjoyable. One of the most common errors is far too loud music that makes the dialogue hard to comprehend. The desire to make films stems is from the wish to communicate. If the message is drowned in some noise what is the point making the film?

The method to overcome the volume issue is available to nearly all but the most basic of editing software. In this instance Adobe’s Premiere Pro film editing suite is used to demonstrate the methodology. Fig. 1 shows the Premiere Pro timeline section of the full screen view.

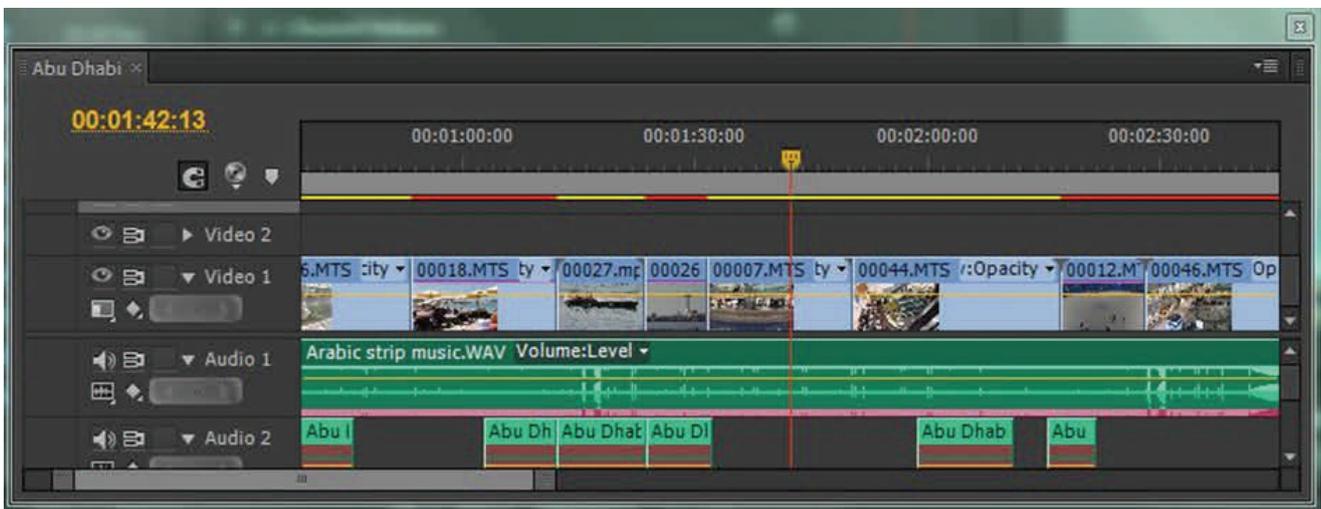


Fig. 1. Timeline

In Fig.1 Audio 1 is a music track and Audio 2 is the voice-over. The yellow line represents the volume at which the original recording was made. In this instance the yellow line happens to be the film maker’s best friend. What Fig.1 indicates is that both the music and the voice-over are at equal volume; hence the dialogue is lost in the loudness of the music. This is probably the most common mistake that budding film makers commit.

Here we need to introduce the concept of key frames. The word **frame** comes from the film world meaning one picture in the film strip. The word **key** represents same change in the continuity of events.

In Fig. 2 the yellow line shows the volume of music and the white diamond shape shows the position of the key frames when events change. In this instance the volume of music drops to a lower level and continues at that lower level until another key frame indicates some further change.

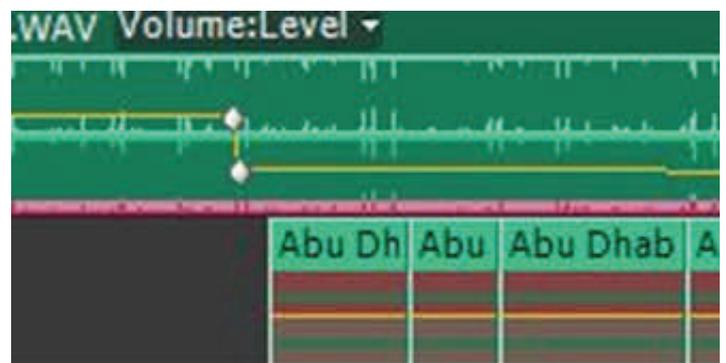


Fig. 2. Key frame

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Video or sound editing systems invariably provide tools to introduce key frames to allow editors to do their job. In the case of Premiere Pro this tool (Fig.3) looks like a pen, and by selecting this tool and clicking on the volume line key frames can be added.

There is a simple way to correct this imbalance of sounds but sometimes while doing this another error may be made.



Fig 3. Toolbar

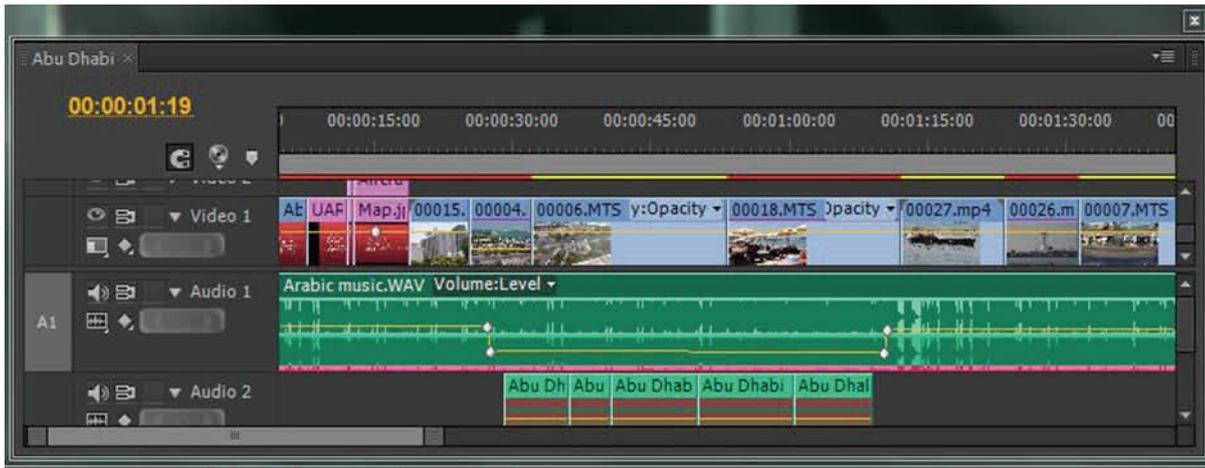


Fig. 4 Dropped volume

Fig. 4 shows the set of key frames that would make the volume of music (Audio 1) dip below the volume of speech (Audio 2), carry on at low level until it meets the next key frame when the volume returns to its original level.

One of the basic tenets of good editing is that any change should be subtle and smooth; only being abrupt when the situation in the script demands it. In this instance it is necessary to make the volume change gradual at dipping at a point near when the voice-over begins and increase when the voice-over stops. In Fig.5 the key frames are moved outwards to allow a gradual change in the volume.

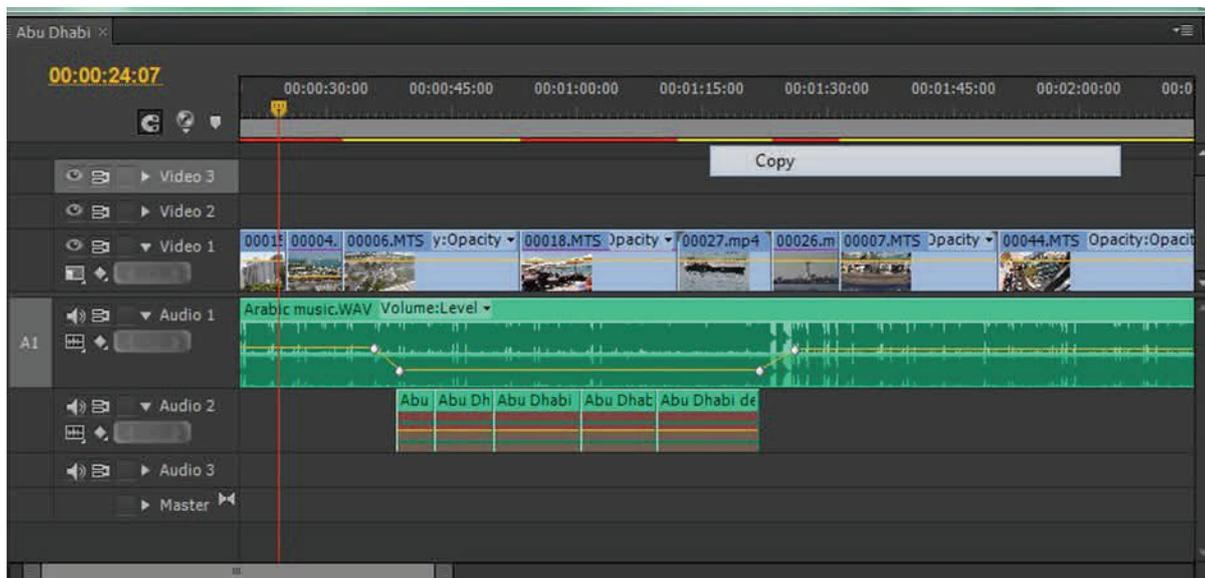


Fig.5. Smooth change of volume

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There are other subtle changes that could be made at the point in the key frames that would make the change even smoother, but that is outside the scope of this simple introduction. Treating the relationship between music and voice-over at this relatively simple level can make a significant improvement to the listening process.

There is however, one other thing that the budding editor must consider, and this is at the very beginning of the film. Never hit the audience with the full volume of the music. Use key frames starting with the music at zero level, and increase the volume gradually until the required volume is reached. Fig.6 shows the beginning of a documentary film when this gradual opening was applied and then reduced to allow the voice-over to be heard.

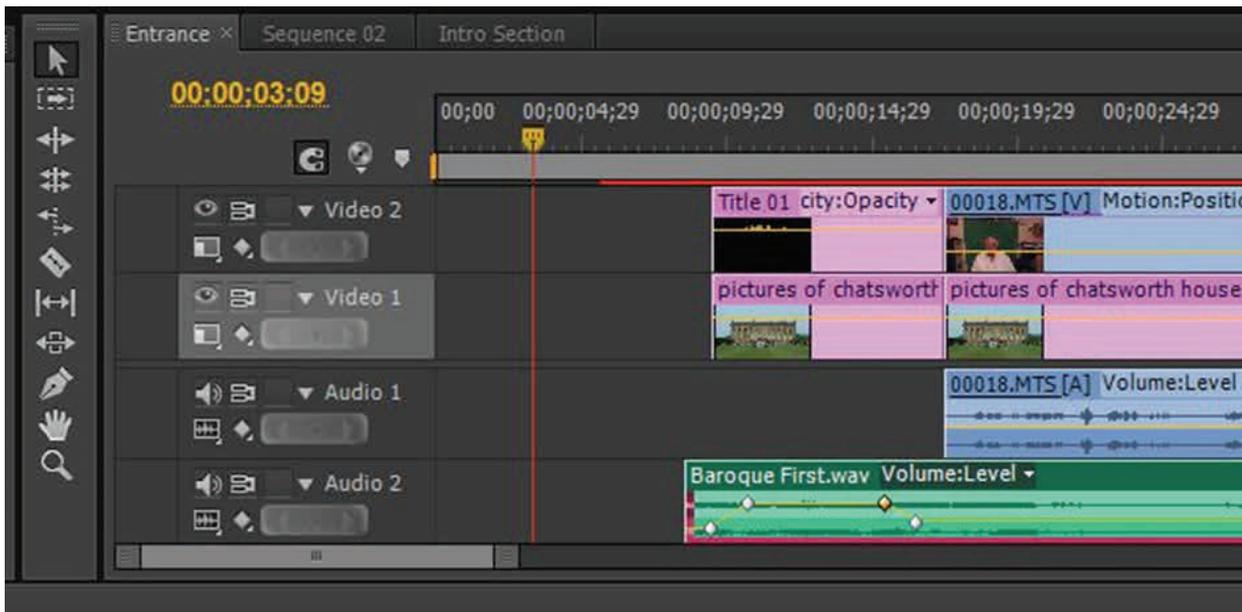


Fig. 6 Opening edit

One more thing about volume. It is often asked by starting editors:- what is the correct volume relationship between the various sound elements such as voice-overs, music and other ambient sounds. The general opinion in various publications is that the Master Volume (the total sound) should fall between (minus) -18 dB and (minus) -12 dB and the loudest momentary sounds should be peaking at a maximum at -3 dB. Fig.7 shows the volume mixer of Premiere Pro. This is a visual representation of the volume variation as the video is played.

Here Audio 1 shows the volume variation of the music track, Audio 2 is the voice-over and Master shows the overall volume. Whatever the recording is, individually or together, it should never exceed 1 dB. If it is above this limit the reproduction will be distorted. These are however, starting recommendations. The only reliable instrument is the human ear. If the combination of music does not drown the voice-over and/or the ambient sound is not confusing, the mix is correct. The proviso is to test the sound combination of the video using reasonable speakers. The speakers don't have to be monitor quality, but equally the penny size speakers of laptops won't give reliable results.

A little effort and attention to details in sound editing will provide a disproportionate improvement in the viewing pleasure.



Fig.7 Audio mixer