One Touch 535/735 AMR Melodies & Sounds Creation Guide

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1 INTRODUCTION 3

2 ONE TOUCH 535/735 AMR EMBEDDED FORMAT SPECIFICATION 3

3 AMR MELODIES CREATION : RECOMMENDATIONS 3

4 ONE TOUCH 535/735 LOUDSPEAKER SPECIFICITIES.....4

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1 Introduction :

The One Touch 535 and 735, two of the 2003 mobile phone range of Alcatel, will allow you to embed sampled sounds and play them as melody or alert. The sound format of the files is AMR IETF, MMS compliant format thus readable by all MMS compliant mobile phones. With the One Touch 535/735 PC Suite, downloadable on **www.my-onetouch.com** on the One Touch 535 or 735 specific page, you will be able to convert and transfer all your sounds to the right format, in several different bitrates.

2 One Touch 535/735 embedded sound format :

AMR IETF narrow band 8KHz (4KHz bandwidth)
Bitrates : 4.75, 5.15, 5.9, 6.7, 7.4, 7.95, 10.2 or 12.2
Recommended bitrate : 10.2 (= One Touch 535/735 PC Suite Content Manager "high quality")

3 AMR Melodies creation : recommendations :

With the original wav file :

- Add a filter to reduce bandwidth to 300-3400 Hz before converting to AMR to be in the AMR bandwidth limits : AMR codec has been developed mainly for voice (which is in those frequencies), keeping signal elsewhere can create artifacts during conversion .
- The One Touch 535/735 has an integrated compressor (+18db) which increase volume. Therefore, it is better not to reach full dynamics, an original wav file too loud can sound distorted after conversion and transfer to the mobile. You should not go beyond a dynamics of 80% of max.
- Duration of melody should be limited to 15 sec max
- Best results will be obtained with few instruments +voice. Too rich orchestration are too complicated for the AMR codec, as it has been developed essentially for voice.

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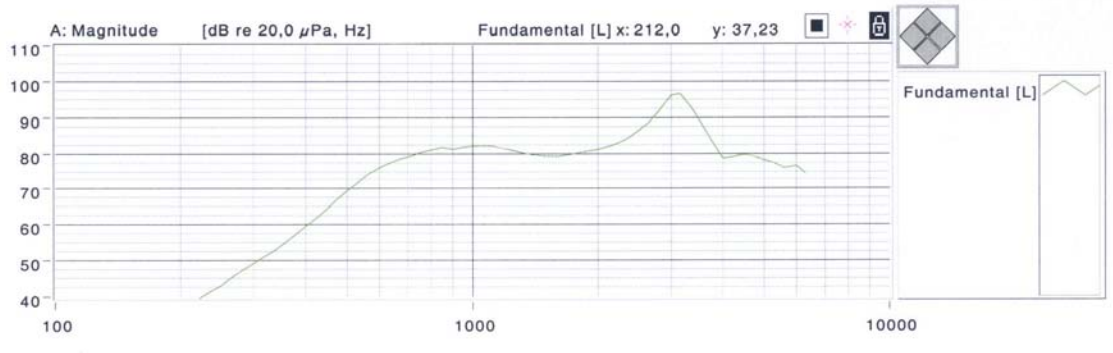
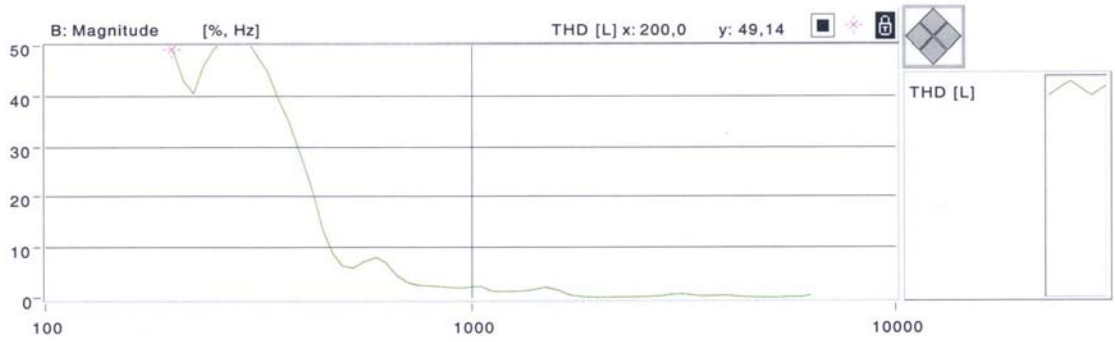
4 Loudspeaker specificities

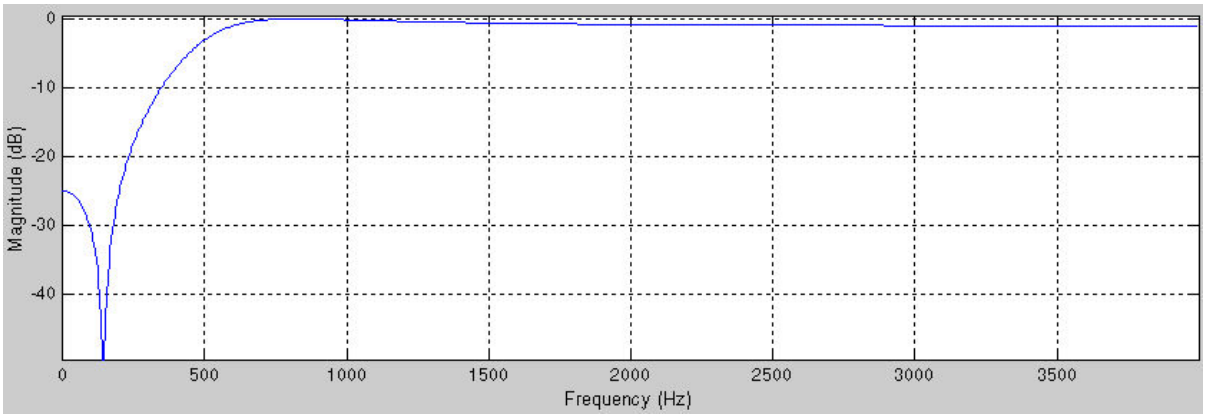
Herebelow, loudspeaker and equalizer curves will help you creating and arranging sounds in the best frequencies.

The mobile phone loudspeaker, because of its reduced size, doesn't have a good rendering on low frequencies:





Besides, an equalizer suppresses the very low frequencies (-50dB, 140Hz) to avoid vibrations on AMR melodies:



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