**Introduction to the Generation and Compression of Spiflash Audio**

**I. briefly**

Our chip supports the spiflash scheme, only supports audio playback, and does not have the function of generating audio, so users need to generate their own audio to store it in the memory of our chip interface.Actually, it&apos;s very simple to generate this audio, so I&apos;ll give you a brief introduction.

There are three main methods to generate audio:

1. Advanced Chapter - directly invite real people to record, this can be directly Taobao to find the relevant service providers can be

2. Intermediate Chapter--Software Generation of "Text-to-Speech" with Free Network

3. Preliminary Chapter - Using Recording Method to Generate Speech

**2. Description of classification of methods**

**1. Advanced Chapter - Invite real people to record directly**

(1) This method can be directly searched on Taobao. Basically, the cost should vary from 500 to 1000.

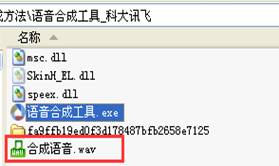
(2) This method is mainly to strive for high requirements for some products, because the real person&apos;s pronunciation, the sound effect will be much better.

(3) At the same time, if you record live recordings, for example, you can find "foreigners" to record them directly in English.In addition, some unusual voices can only be used in this way.

**2. Intermediate Chapter--Using "Text-to-Speech" Software**

(1) Text to voice, there are many free software on the network. Here we strongly recommend the free software of "HKUST Xunfei", after all, the products made by the most professional companies.The effect must be the best.In the attachment, we provide the software.

(2) Software usage

The bottom right corner can be checked so that the synthesized voice will generate an xxx. wav file under the software directory.

This user can try it directly, and it&apos;s very simple to use.

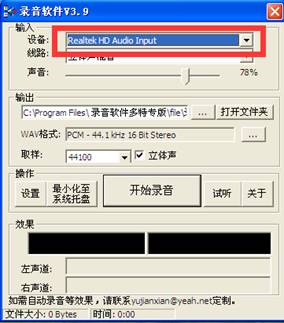
(3) After generating the wav file, although our chip can play normally.If users use SPIFLASH as storage medium, it is recommended that users use MP3 conversion software directly to convert to MP3 format.This saves memory space.

**3. Preliminary Papers - Using Audio Recording Method**

(1) Users can use their mobile phones to record and find a quiet place where they can download an MP3 recording software.

(2) Users can record through the computer, because our computer has an audio input port, which is the "red" audio port.You can use the software we recommend, "Recording Software"

(3) The method of using the software is as follows:

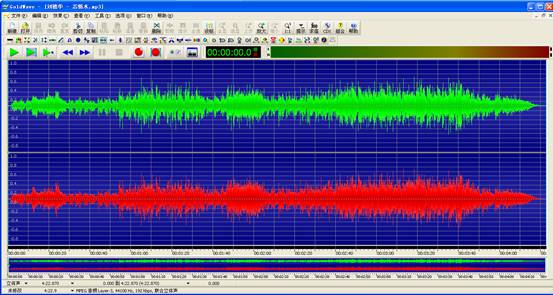


The recording software is set as above.

Connect the external MIC line to the audio interface of the computer. Be careful not to confuse the headphone interface with the MIC input interface.Just click on the recording.

**III. Audio Compression Method**

1Fighting for the characteristics of small capacity and stability of SPIFLASH.Our chips.The voice can be updated directly through the USB line, but for the common MP3 song files, mostly about 4M bytes, using SPIFLASH, the space is very laborious.But as a voice broadcasting and prompting occasion, we don&apos;t need such a high sampling rate at all.

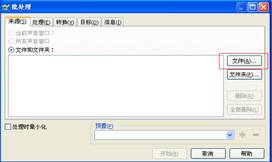
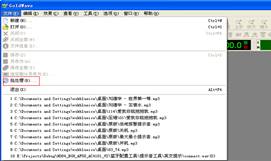


From the bottom left corner of the picture above, we can see that the sampling rate of "world first class. MP3" is as high as 44100 HZ.The bit rate is 256 KBS.This parameter shows that the current song sound quality is quite good, so it takes up 4.5M of space.

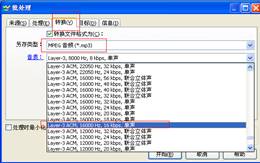
2But in fact, we don&apos;t need such a high sound quality at all, and then we can compress it.As follows:

Use the "GoldWave" software.

(1) Click on batch processing to add files that need to be compressed



(2) Select "conversion" and set the sampling rate to 16 000 KHZ and the bit rate to 16 KBS.Mono channel can specify the path to store files after conversion.

(3) After compression, the 4.5M file becomes 507K.At the same time, there is no great loss of sound effect in general voice broadcasting occasions.That&apos;s the way it is.

**3. Remarks:**

(1) If it is WAV file, it is strongly recommended that customers can also use this software to convert to MP3.Because we support MP3 decoding, why not use such a powerful technology?

(2) After the conversion, the user can directly listen to the effect on the computer. The effect of playing on the computer is similar to that of playing on our chip.

(3) If the sound quality is not good, the sampling rate and bit rate can be increased appropriately.You can try it on your own.

Here we recommend another value, that is, the sampling rate is 32KHZ, the bit rate is 32kbs, and the mono channel.

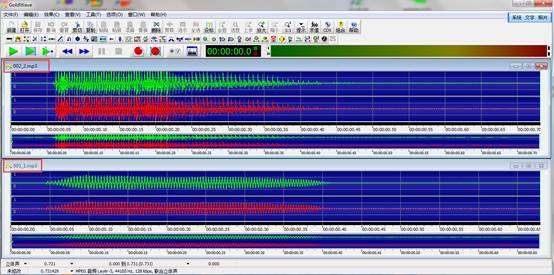
You can use this if you need to modify the volume of the source and tailor the source.

**IV. A Simple Method of Audio Synthesis and Modification**

**1. Audio synthesis method:**

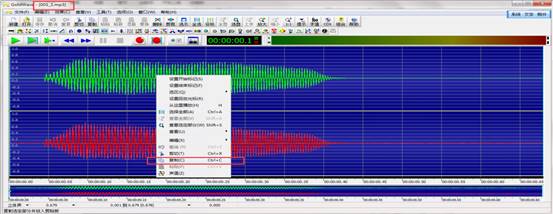
(1) The software still uses GoldWave.

(2) The screenshots are as follows:

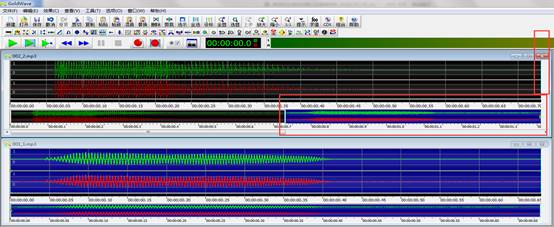


Here you open two audio files, just select one file to copy and paste it at the end of another file.

The following picture:



Paste it directly at the tail, as shown below



**2. Audio modification methods:**

**(1) The same software can adjust the volume of audio, fade in and out effects, as well as tailoring, etc.**