# Recording MP3 function supports TF card and U disk recording

# I. Introduction

1The chip supports file system, read and write function of TF card and U disk, and high quality recording function of 128 KBS and 44.1 KHZ.

2By default, the chip shuts down the recording function. It needs serial instructions to turn on and send: AT+RE01\rn is enabling recording and memory.

**3. Test board, there is a simple test method, press "mode" to switch to recording mode, then press "PP" to start recording, long press stop and play just recorded.**

# 2. The Method of Realization--See Chapter 5.1.9 of the Manual for details

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| AT+RC00 | Waiting to enter the recording state, i.e. stopping state | AT+RC04 | Continue recording - only in pause mode |
| AT+RC01 | Start recording | AT+RC05 | Recording stop |
| AT+RC02 | Pause and continue recording | AT+RC06 | Play the current recording |
| AT+RC03 | Recording pause - only in the recording state | AT+RC07 | Delete the current recording |

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| **1. Note that the recording function is turned off by default. It needs to be turned on by instruction. The next time the power is on, it will be turned on by default. See 4.2.8.**  2. If recording is required, the device must be on-line and inserted into TF card or U disk to take effect.The state of the recording can also be seen in the indicator lamp. Refer to the BT201 module.  **(1) Recording flash, stop state is slow flash, pause state is always bright**  (2)**The PP key of the test board is to start recording and pause.The Mode key is short-click switch mode and long-click delete recording.** |
| 1. You must first specify that you enter the recording state and wait, then send the instruction to start recording. At this time, the recording will start automatically.  (1) Sampling rate of MP3, 128KBS  (2) Recording files are generated under the "KT\_REC" folder |
| 3The recording process can be paused, then continue recording, send RT02 |
| 4If the recording is completed and no playback is needed, send 03 instructions, and then stop.  (1) If you want to play, issue 04 instructions, which will automatically stop, and then go to play the just recorded file.  (2) If you have finished recording, you must specify to switch to the mode of work you need, otherwise the current resources will still be reserved for the recording thread.  (3) After entering MUSIC, you can specify the path to play the previous recordings and check the rules of finding the generated recordings in detail.  After entering music, you can still delete files, see 5.1.4.Note that all recordings must be played in a playback state. |
| 5In the recording process, the chip will automatically return to the current recording state when the state changes.  (1) RC+00 -- Represents the stop state of recording RC+01 -- Represents the start state of recording.  (2) RC+02 -- Represents the pause state of recording RC+03 -- Represents the broadcast state of recording.  (3) RC+04 -- Represents the state of completion of recording and playback RC+05 -- Represents the state of completion of recording and playback.  (4) RC+06 -- Represents deletion of the just recorded state RC+07 -- Represents completion of recording initialization -- enters the state of recording return. |
| 6Recording is in accordance with the record file will be fixed under the KT\_REC folder, it is impossible to change.The newly added files may be numbered FILE0001 - FILE9999 in turn.**Rules for folder and file name generation**  7Every time the recording is opened, the files in KT\_REC will be retrieved. Starting from 0001, if 0001 exists, 0002 will be generated. If 0002 exists, 0003 will be generated. It will be judged in this way until it finds the file name that does not exist, then it will start recording and generating recording files. |

At the same time, there is some information when generating recorded files.

1. Existing filename RF+

2. The newly generated file name, RN + is shown in the following screenshot



# III. Operational methods of recording

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| **1. Note that the recording function is turned off by default. It needs to be turned on by instruction. The next time the power is on, it will be turned on by default. See 4.2.8.** |
| 2To debug the recording function, please make sure to debug it with the indicator lamp and serial port output of our test board BT201.Because the recording function is a little more complicated.  Without comparing this information, debugging can be difficult |
| 3. After the recording is completed.There are two ways to delete inappropriate recording files.  (1) Deleting can only delete files, not one folder at a time. If a folder has more than one file, it needs to send multiple deletion commands.Reference 5.1.12  (2) There are two ways to delete files. This is only the first one.Another way is to refer to Chapter 5.1.4.**AT+AA08** |
| 4After the recording is completed, you can give instructions to listen to it, how to save it properly, and delete it immediately if it is not suitable, and issue instructions AT+RC06. |

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| **1. In the recording process, there are two parameters that can be set.**  **(1) Bit Rate of Recording**  **(2) Increase of MIC for recording**  **See Chapter 5.1.13 of the Manual for details.** |

# 4. A Collection of Common Questions on Audio Recording

In the scheme, we support the recording function. There are two ways to use it, simple and complex. The details are as follows:

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| Question 1 | **In TF mode, the function of mode button will appear when the button is pressed short, and the mode will be switched.** |
| Reply | This shouldn&apos;t exist. Maybe you touched the AD button foot of the test board BT201, which caused the wrong trigger. |

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| Question 2 | **RC06 can play after recording, but it can&apos;t play AT+AJ command after resetting according to the file name just recorded under the specified folder, nor can it play again according to the file name after resetting.** |
| Reply | 1. Recording is a separate mode in our system.  2. All operation of recording must be completed in recording mode.If you need personalized playback of these recordings  You have to switch to music mode.  3. Playback mode, can be folder circular play, can be specified "folder-file name" to play.  4. If you need to play once, you need to set the playing mode of "music mode" to single play. See 5.1.7. |

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| Question 3 | **Existing commands AB can play music by segment number, which seems to be in the root directory only.**  **There are no commands in the default KT-REC recording directory.It is suggested that this can be added, because after recording, it&apos;s normal to check the recorded files in order! \_\_\_\_\_\_\_\_\_\_\_\_Without this command, I&apos;m sure I can&apos;t remember the name of the file if I record too many recordings!** |
| Reply | 1. The AB command is played in physical order, in the direction of all the files in the whole device, not a single recording file, or the folder in which the recording is made.  2. If you need to play a recording file, you can send AF or AJ instructions to play it. |

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| Question 4 | The RC01 command automatically adds the name of the recording file, which is very useful! |
| Reply | Our recordings are made in two ways:  1Set up folders and file names to generate recording files and start recording, see  "**5.1.13 Audio Recording Function - TF Card or U Disk - Specified Folder File Name Audio Recording [RP] [RB] [RV]**  2Another kind of recording. It&apos;s a simple recording. See more about it.  "**5.1.9 Recording Function - TF Card or U Disk - Simple Application [RC]**  This way of recording is to automatically generate folders and file names. Take a look at the manual in detail. |

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| Question 5 | Suggestions can be imitated ABXX command to add a command ACXX can delete the paragraph of speech! |
| Reply | There are many ways to delete files:  1. After the recording is finished, it can be deleted immediately. See "RC07" directive for details.  2. You can specify folder file name to delete, see ""**5.1.12 TF Card or U Disk Instruction - Designated Path Delete File [AL]**  3. You can also send "ABxx" instructions, and then immediately send ""**AT+AA08 Deletes Current Played Files**  **==> In summary, deleting a file requires that the current filesystem pointer point to the file.** |

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| Question 6 | The command ABXX seems to play down automatically after playback. How to play it only once is helpful for checking voice clips. |
| Reply | 1Can set up "music mode" play mode, refer to ""**4.2.7 Set Play Once Stop or Sequential Loop [CJ]** |