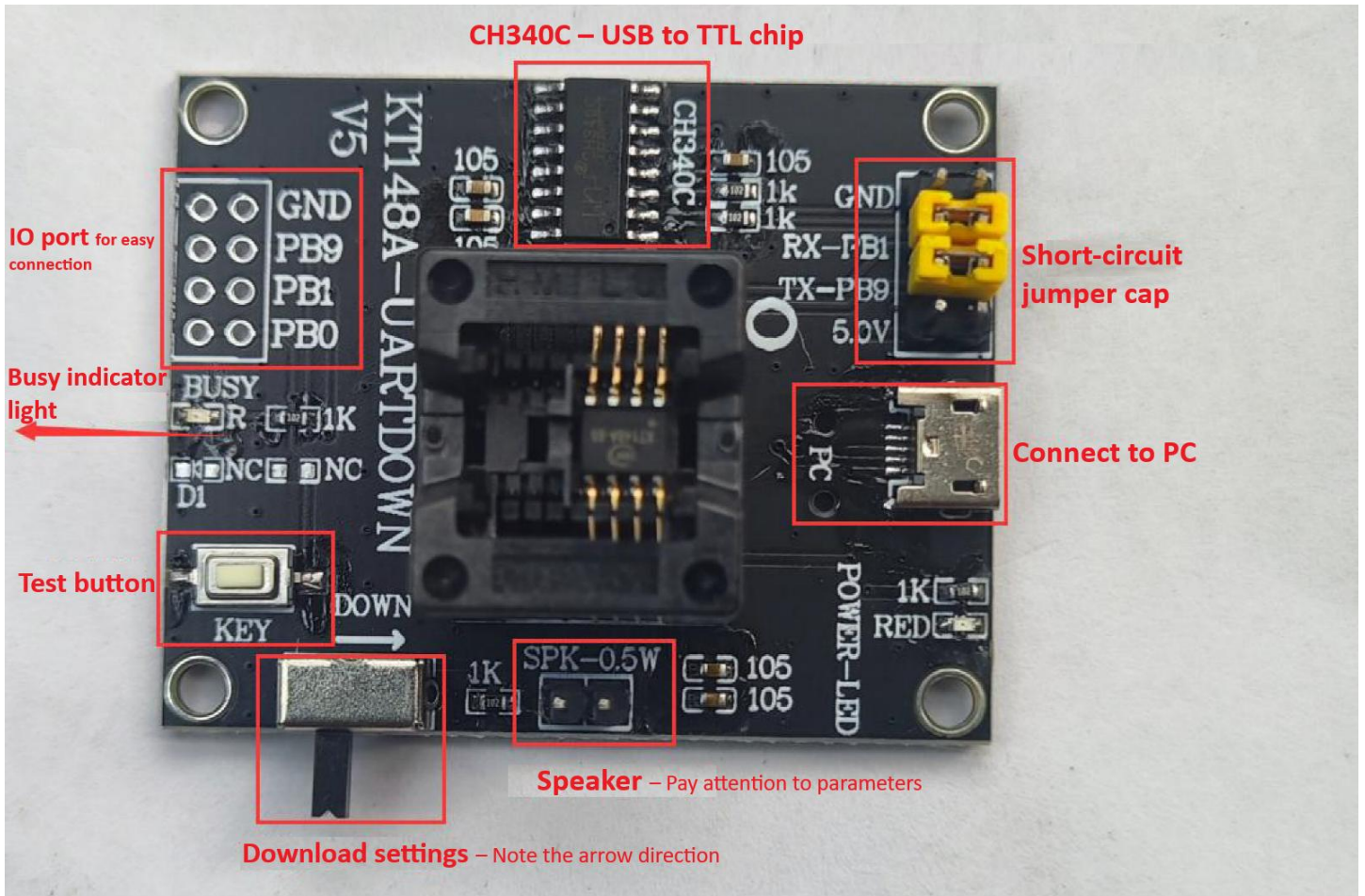


1. MP148 Voice Module Introduction

If you encounter issues, check the FAQ first – Very important – Scroll down for more.



The design is as shown in the figure above, and the hardware version may be modified later. This download board module serves two main purposes:

1. To facilitate small-batch customers in replacing the voice content themselves.
2. To allow customers to test the voice replacement function. Note that all the chip's I/O pins are exposed in the top-left corner.

The board is equipped with a CH340C chip (USB to TTL), requiring only a USB cable to connect to a computer for testing and programming.

==> The test board has a test button connected to pin 4 of the chip. Pressing it will play the next sound.

==> The TX pin of the CH340C chip is connected to the RX pin of the chip (PIN3 – PB1), with a resistor in between.

==> There is a **toggle switch** on the board. **Switching it to the resistor side enables download mode**, while switching it to the positioning hole side enables normal mode.

==> Pay attention to the direction of the arrow. The arrow indicates the download state; otherwise, it is in normal controlled mode.

==> **The USB interface must use a 4-core cable, which supports communication functionality, not just a charging cable.**

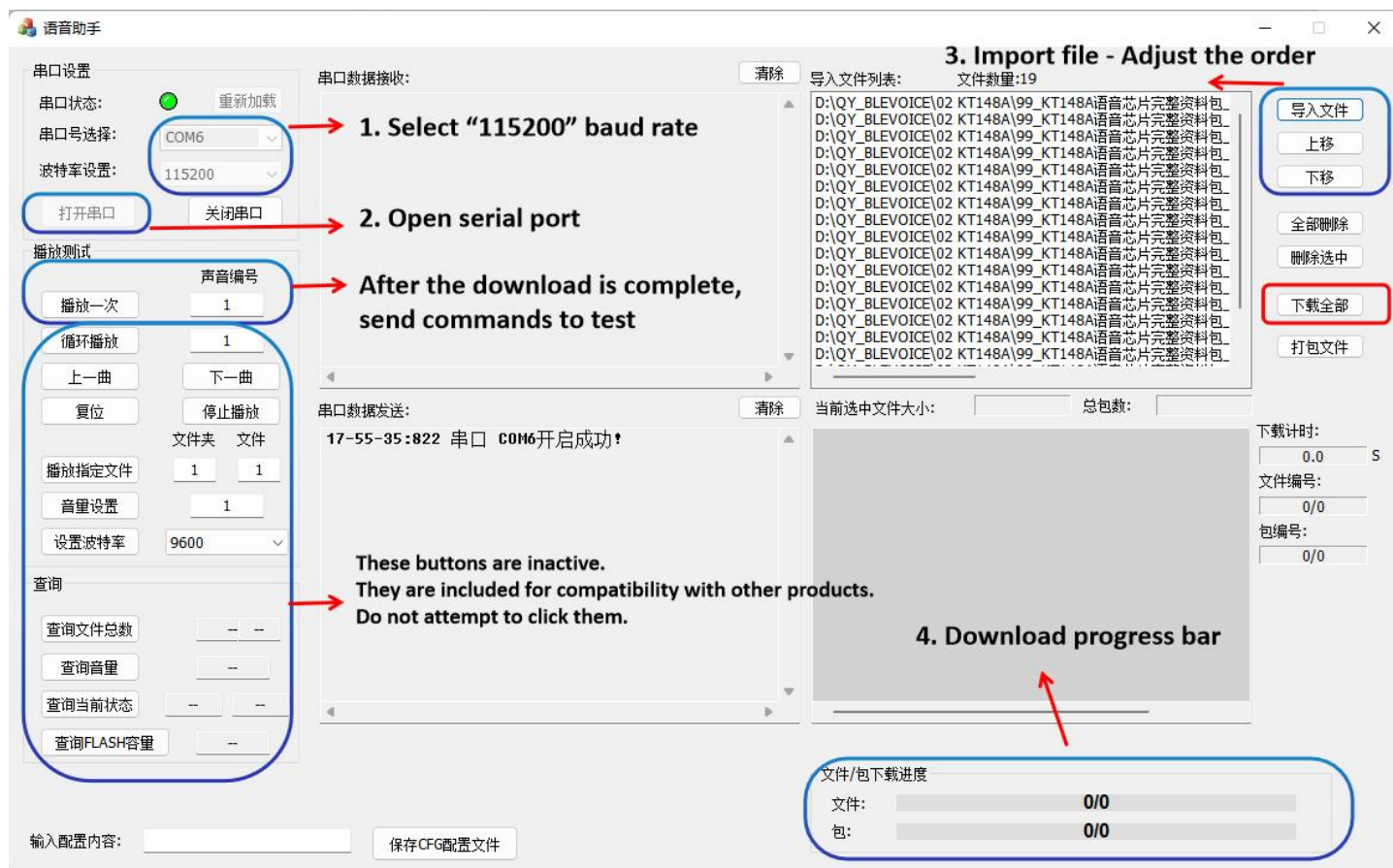
==> Before use, you must install the driver for CH340C or CH340G. There is plenty of information available online. If the installation fails, do not contact us, as we are merely providing the information. After successful installation, a port number (COM) will be available.

==> On the board, there are "jumper caps (2 yellow ones)". If you need to download, connect the jumper caps. **If not, remove both.** Removing the jumper caps means the KT148A chip operates independently and can be tested on its own.

2. Instructions

2.1 Connect the Computer and Sample Board via USB

1. No screenshot is needed here. Pay attention to using a 4-core cable and a micro-USB cable (the type used for older Android phones). Also, ensure the driver is installed.
2. Open our tool software, as shown in the figure below.

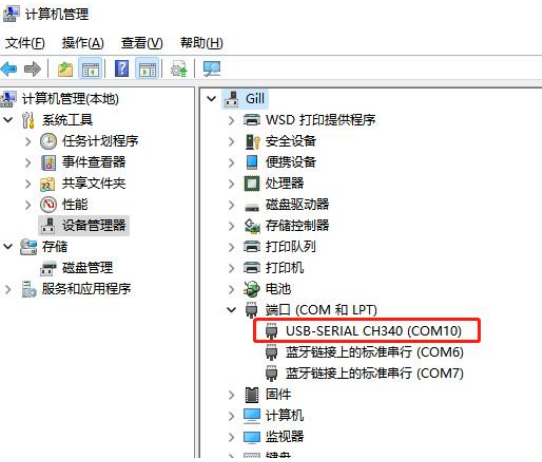


3. You can click "Play Once" and enter the track number in the field. Then, click, If sound is produced, it means the serial port is functioning.
4. Follow the method mentioned earlier to import the file and click "Download All."
5. For small-batch chip programming, the process is the same.
6. When moving to mass production, contact us for bulk production support.

3. Problems That You May Encounter

3.1 Why is the serial port number not displayed when connected to the computer?

1. First, confirm whether a 4-core USB cable is being used.
2. Verify whether the driver is properly installed. Check in "My Computer" -> "Device Manager," as shown in the figure below.

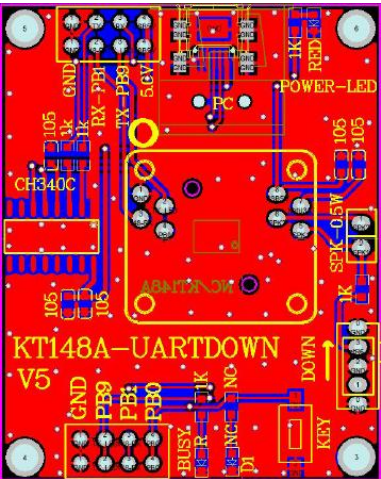


3.2 Why is there a serial port number when connected to the computer, but still unable to download?

1. First, check whether the CH340C circuit is functioning properly. Verify if the port number appears and if the device is listed in the Device Manager. Refer to the explanation in issue 3.1.
2. Try removing the jumper cap and short-circuiting the RX and TX pins of the CH340C chip. Use a serial port debugging tool to test if it can send and receive data. If not, it indicates an issue with the CH340C circuit.
3. Check whether the CH340C chip is properly connected to the pins of the KT148A chip. Use a multimeter to test the connections, referring to the KT148A schematic.
4. Verify whether the toggle switch is in the correct position. Make sure it is switched toward the resistor side. Pay attention to the arrow direction; switching it toward the arrow indicates download mode. After switching, power the board again. If you hear a beep from the speaker, it means the board has entered download mode.

3.3 Can the PCB design files for this board be provided? What are its dimensions?

Sorry, the PCB and schematic of this board are not provided, so please stop asking.
 The board itself is very simple, consisting of a minimal system for the KT148A and a CH340C USB-to-TTL chip.
 The dimensions are: 40mm * 50mm.



3.4 Why doesn't the board play sound when I press the KEY button? Why does it play briefly and then stop?

This issue is addressed by answering two main questions:

Question 1: Why doesn't it play sound when pressing the KEY button?

1. You might not have exited download mode. Check the position of the toggle switch and refer to Section 1 for details.
2. You might be using a keypad version of the chip, and there are fewer than three files loaded in the chip. Since the KEY on the download board corresponds to IO3, please refer to the document "20230410_KT148A Chip IO Trigger Function Description_Supports 3 Channels_V6" for more information.

> 20 MP148 > 99_KT148A Voice Chip Complete Data Package_V5_20231212 >

名称	修改日期	类型	大小
00_How to Purchase Samples	2025/8/9 22:51	文件夹	
01_Hardware	2025/8/9 22:51	文件夹	
02_User Manual_UART Version	2025/8/9 22:51	文件夹	
04_Reference Code	2025/8/9 22:51	文件夹	
05_Chip Datasheet	2025/8/9 22:51	文件夹	
06_Demo Videos	2025/8/9 22:51	文件夹	
07_Other Application Notes	2025/8/9 22:51	文件夹	
08_Tool Software_Generate-Compress-Download	2025/8/9 22:51	文件夹	
09_Mass Production Guide	2025/8/10 21:57	文件夹	
10_Key Version Function Description	2025/8/9 22:51	文件夹	
14_KT148A Voice Chip- Volume_Sound_Comprehensive Summary_Such as Low S...	2025/3/26 2:51	WPS PDF 文档	415 KB
20240928_Method for Self-Replacing Voices on the KT148A Chip_V8.pdf	2025/3/25 21:08	WPS PDF 文档	1,126 KB
Explanation of Checksum – and How to Use It.txt	2025/3/20 5:14	文本文档	2 KB
KT148A FAQ Collection 2_Updated to 46.pdf	2025/6/28 15:39	WPS PDF 文档	3,303 KB
KT148A Voice Chip Reference Schematic-SOP8_V4.pdf	2025/3/10 23:10	WPS PDF 文档	640 KB
Precautions for KT148A One-Wire Communication and Common Debugging Iss...	2025/3/26 2:52	WPS PDF 文档	491 KB
Troubleshooting – First Check the Manual or Compilation, Search for Keywords....	2025/3/20 5:31	文本文档	3 KB

3. It's possible that the two jumper caps for the serial port were not removed. Refer to the description in Section 1.
4. If none of these issues apply and it still doesn't play, consider whether the chip might be faulty. Try replacing the chip.

Question 2: Why does it play briefly and then stop?

1. Because the chip is not directly soldered to the board but is instead connected through a chip socket. This can lead to poor contact.
2. During playback, the current will be relatively large, and the contact impedance between the socket and the chip will be relatively high,resulting in a direct low voltage when playing,leading to a reset.
3. Therefore, if using the download board for functional testing, it is recommended to use a 5V power supply.
4. If the issue persists, consider directly soldering the chip to the back of the download board.

3.5 Why does the busy pin (PB9) on this small-batch download board remain high even after pressing the button to play and finish?

The chip comes in two versions: the keypad version and the one-wire serial version.

1. If it is the keypad version:

==> PB9 – the busy pin, is actually IO1, corresponding to the first segment of voice It has a permanent pull-up attribute and

functions as an input pin.

==> It is normal for the indicator light on the board to remain on.

==> First, check if you purchased the "keypad version." This is indicated on the sample card. Thank you.

2. If it is the one-wire serial version:

==> This pin is used to allow the MCU to detect whether the chip has finished playing.

==> Make sure to remove the two jumper caps used for downloading and switch the toggle to the "non-download" state, toward the button side.

==> Then, power the chip again.

==> First, check if you purchased the "one-wire serial" version. This is indicated on the sample card. Thank you.

3.6 Why does my download board only succeed once when importing and downloading sounds, and then fail to produce sound afterward?

The chip comes in two versions: the keypad version and the one-wire serial version. Check the sample card for the version code:

1. If it is the keypad version:

(1) PB9 – the busy pin, is actually IO1, corresponding to the first segment of sound. It has a permanent pull-up attribute and functions as an input pin, with low-level triggering being effective.

(2) It is normal for the indicator light on the board to remain on.

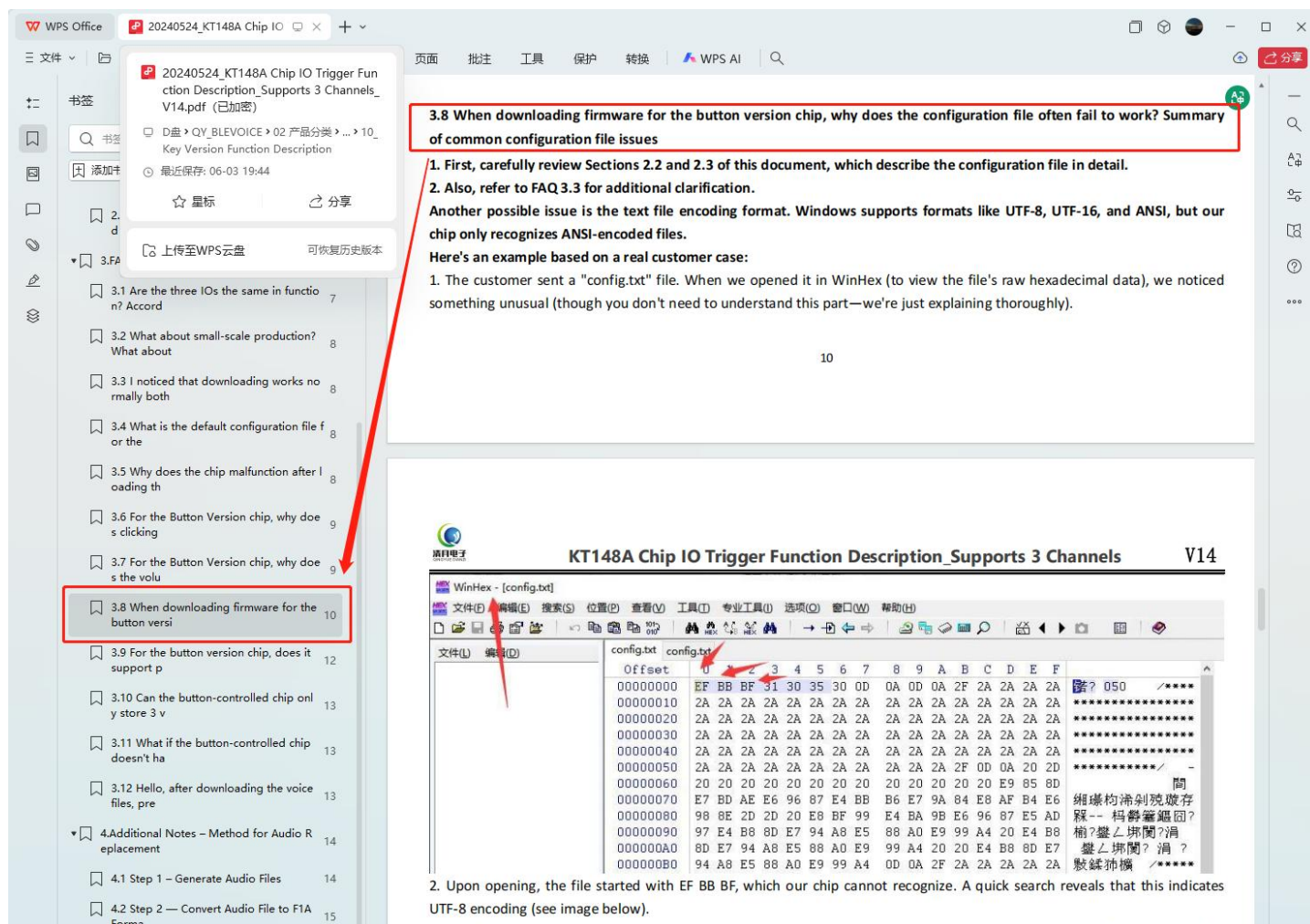
(3) First, check if you purchased the "keypad version." This is indicated on the sample card. Thank you.

(4) The button on the download board corresponds to IO3. Therefore, when downloading, there must be at least 3 audio files. If there are fewer than 3 files, use tweezers to briefly short the corresponding IO pin to ground to complete the triggering.

(5) Also, ensure that the imported configuration file is correct. Refer to the keypad version manual and the FAQ section for details.

20 MP148 > 99_KT148A Voice Chip Complete Data Package_V5_20231212 > 10_Key Version Function Description			
名称	修改日期	类型	大小
01_Voice Files-Test_With Default Config Reference_Factory Presets_1- Arri...	2025/8/9 22:51	文件夹	
10_Button Version Test Exclusive_3 Tracks_F1A_16K_16bit_f1a	2025/8/9 22:51	文件夹	
20240524_KT148A Chip IO Trigger Function Description_Supports 3 Chan...	2025/6/3 19:44	WPS PDF 文档	2,243 KB
For all issues related to the keypad version, please find the answers here...	2024/5/3 22:36	文本文档	0 KB
If you have purchased a complete test board, please replace the chip yo...	2024/5/3 22:46	文本文档	0 KB
Video Demonstration.txt	2025/3/23 21:24	文本文档	1 KB

This problem, competing for button versions,,is most likely a "configuration file" problem. Refer to Section 3.8 of the FAQ for more information. The solution is quite simple, as shown in the figure below:



3.8 When downloading firmware for the button version chip, why does the configuration file often fail to work? Summary of common configuration file issues

1. First, carefully review Sections 2.2 and 2.3 of this document, which describe the configuration file in detail.
2. Also, refer to FAQ 3.3 for additional clarification.

Another possible issue is the text file encoding format. Windows supports formats like UTF-8, UTF-16, and ANSI, but our chip only recognizes ANSI-encoded files.

Here's an example based on a real customer case:

1. The customer sent a "config.txt" file. When we opened it in WinHex (to view the file's raw hexadecimal data), we noticed something unusual (though you don't need to understand this part—we're just explaining thoroughly).

2. Upon opening, the file started with EF BB BF, which our chip cannot recognize. A quick search reveals that this indicates UTF-8 encoding (see image below).

2. If it is the one-wire serial version, the issue of the download board button not playing sound is less likely:

==> Ensure that the downloaded file is correct. Use the reference files provided in our documentation package for downloading and playback.

==> Make sure to remove the two jumper caps used for downloading and switch the toggle to the "non-download" state, toward the button side.

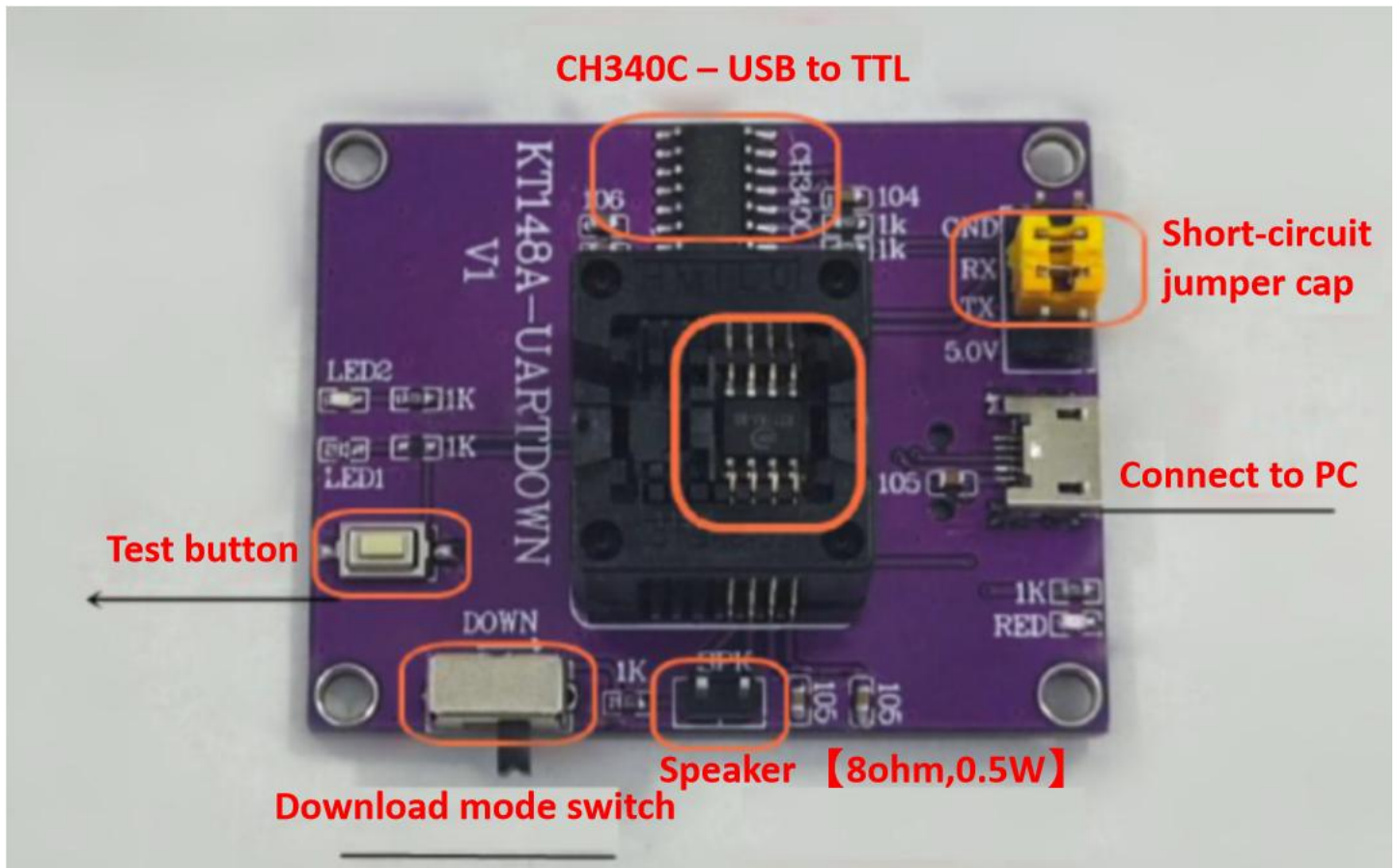
==> Then, power the chip again.

==> First, check if you purchased the "one-wire serial" version. This is indicated on the sample card. Thank you..

3.7 Why does the chip freeze and produce distorted noise when I use the download board to import and download sounds, and continuously press the test button?

1. The primary purpose of this download board is for customers to download sounds.

2. If you perform stress testing, such as repeatedly pressing the button to play downloaded sounds, the chip may produce distorted noise and become unresponsive. The main issue is likely related to power supply.




Solutions are as follows:

1. Check the back of the board, where solder pads for the chip are reserved. Directly solder the chip to the board.
2. The socket used on the board may have poor contact, And play sound instant current requirements are relatively high. Lead the chip to freeze due to contact issues is a possible scenario.
3. Therefore, the principle is: For downloading and simple testing,use this "download board". However, for rigorous stress testing, solder the chip directly to the board for more stable performance.


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1. To request samples, please search for key words such as "KT6368A" directly on AliExpress, enter our official store **[BLE Voice Store]** for solutions.
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