

aSPI28W

User Guide

Firmware –V140 for aMTPxxMK series

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■ Install Software In Windows XP

1. Right-click on the aSPI28W zip file, and click [Extract All...].



2. Click [Next].



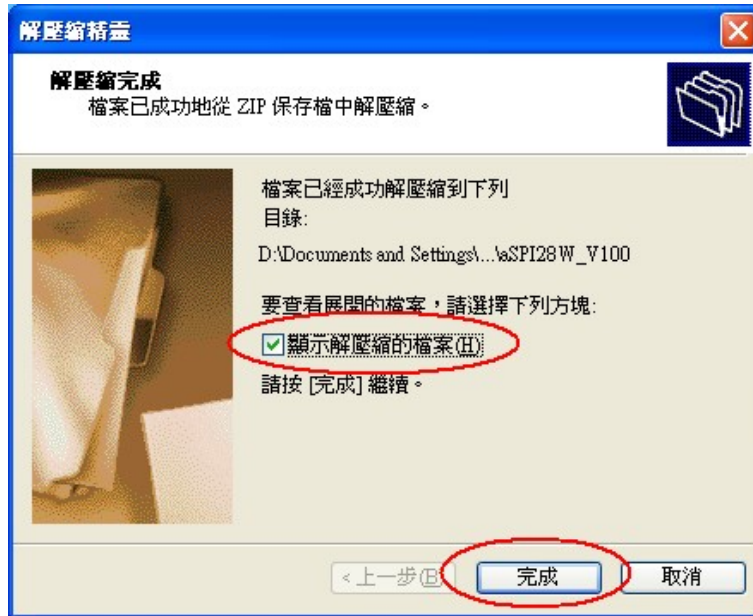
3. Click [Next].



4. Windows will start to extract files.



5. Select [Show extracted files], then click [Finish].

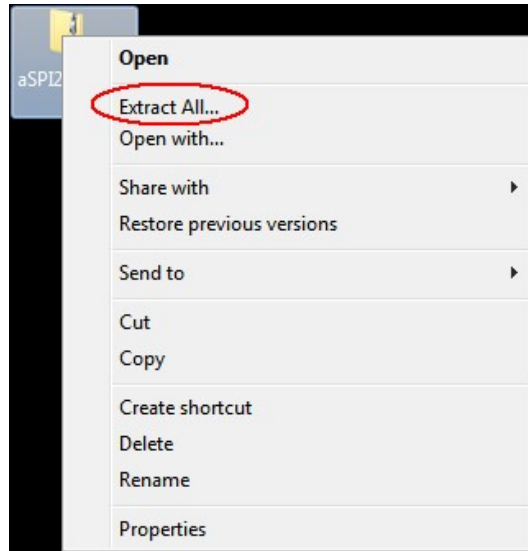


6. Windows will extract all files in the same directory with the zip file.

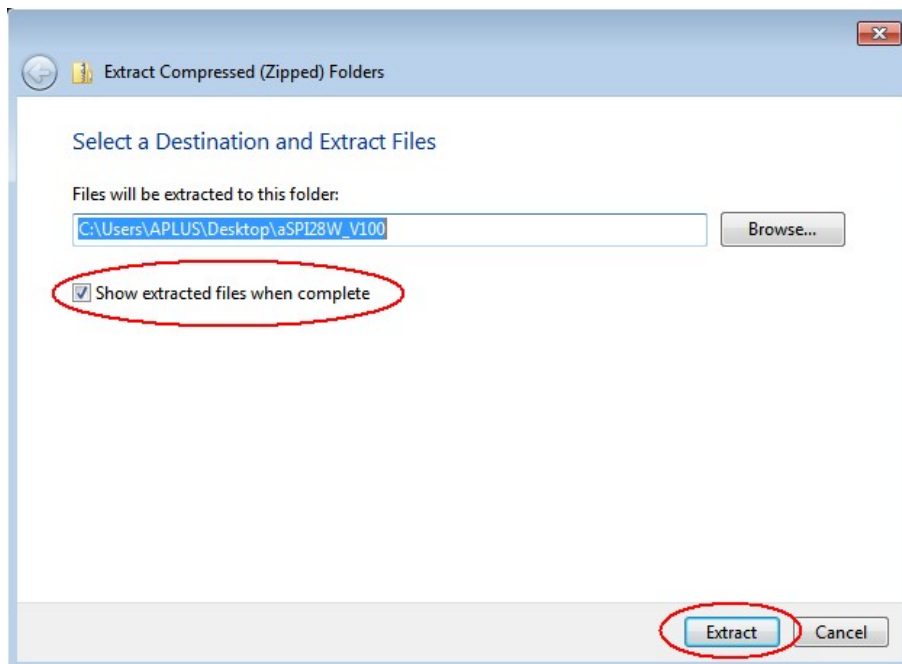


■ Install Software In Windows 7

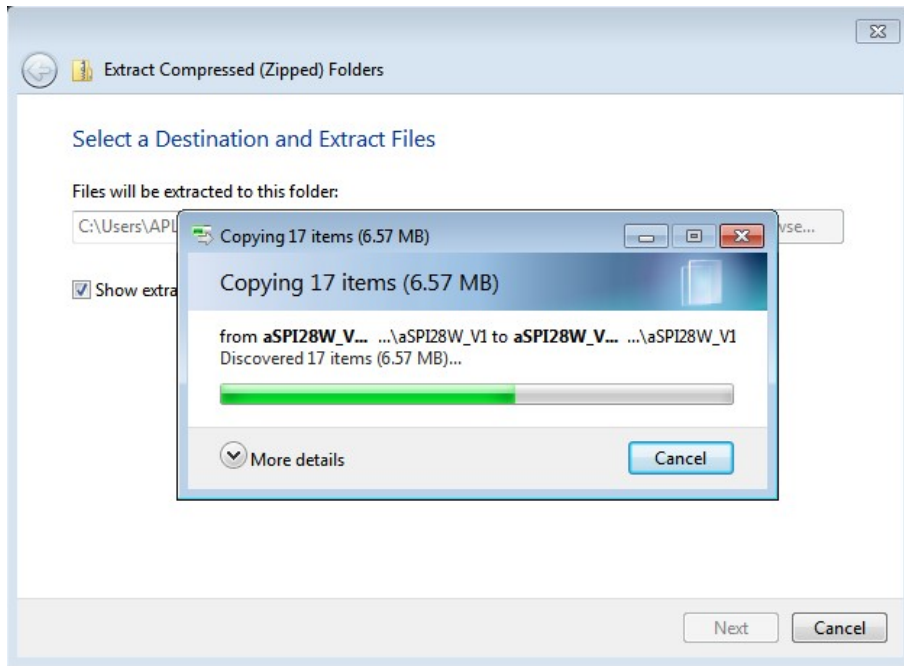
1. Right-click on the aSPI28W zip file, and click [Extract All...] .



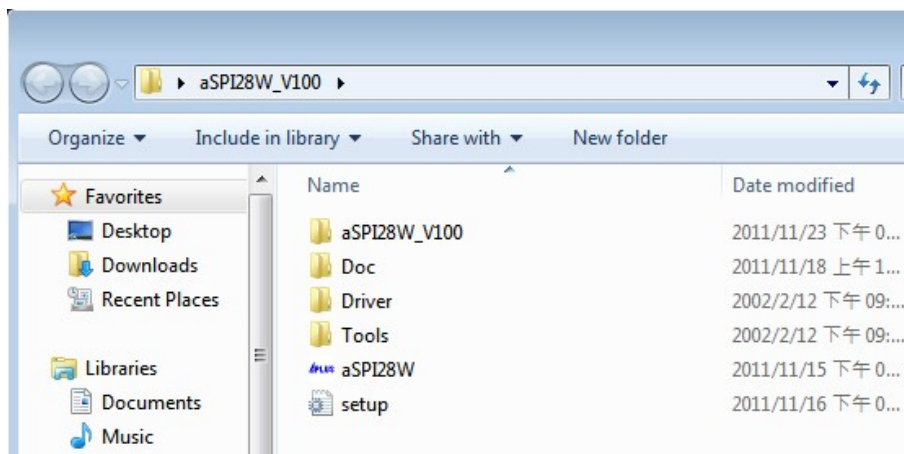
2. Select [Show extracted files when complete] , then Click [Extract] .



3. Windows will start to extract files.

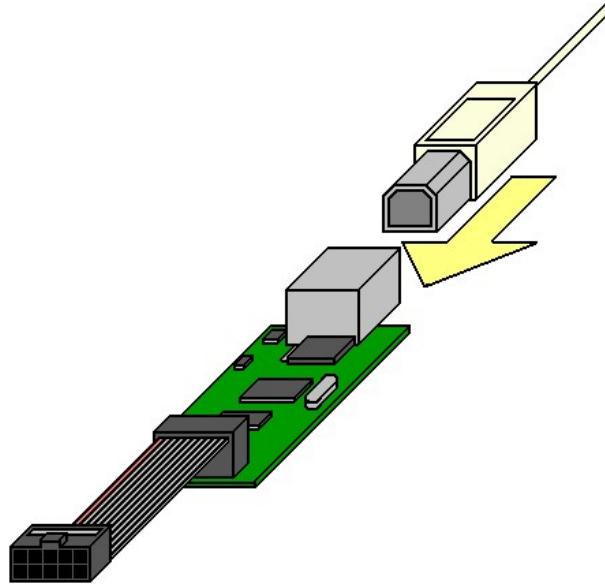


4. Windows will extract all files in the same directory with the zip file.

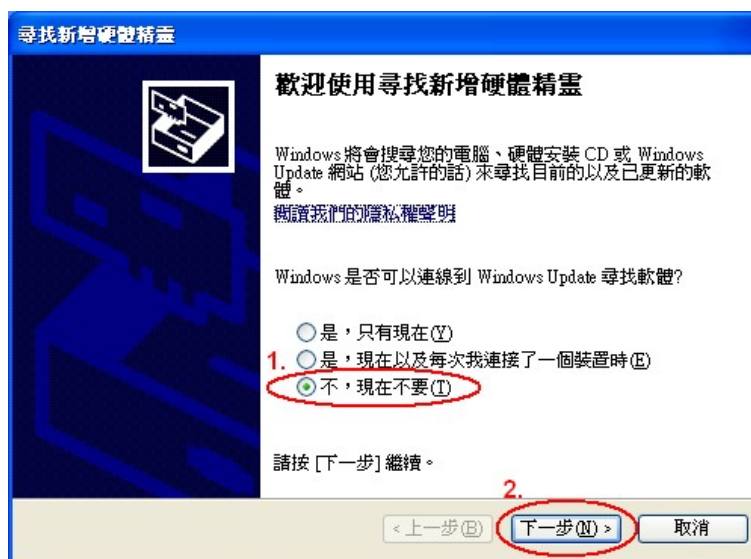


■ Install Driver In Windows XP

1. Connect aSPI28W to your computer by USB cable.



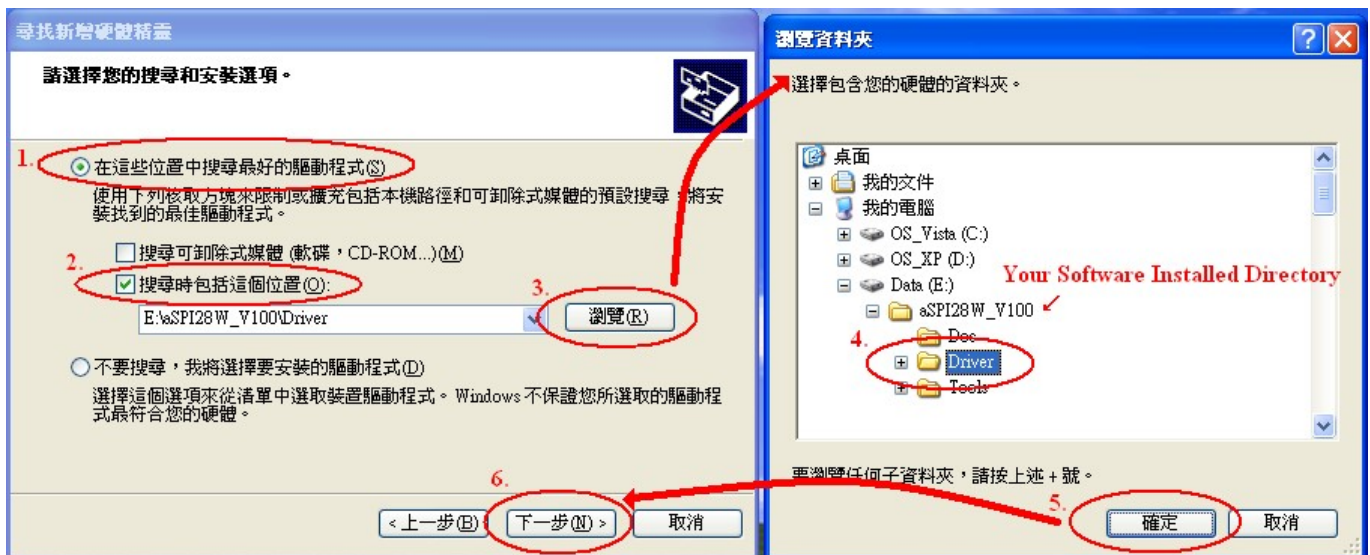
2. When first time connect aSPI28W to the computer, windows will show “Found New Hardware Wizard” windows, select [No, not this time], then click [Next].



3. Select [Install from a list or specific location (Advanced)], then click [Next].



4. Select or click and follow below graph to assign the driver.



5. Windows will copy the driver to your PC and start to install.

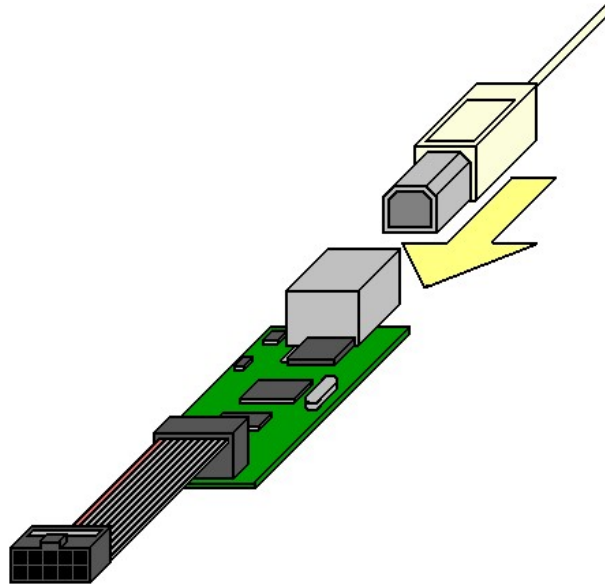


6. Click [Finish] to end of install driver.

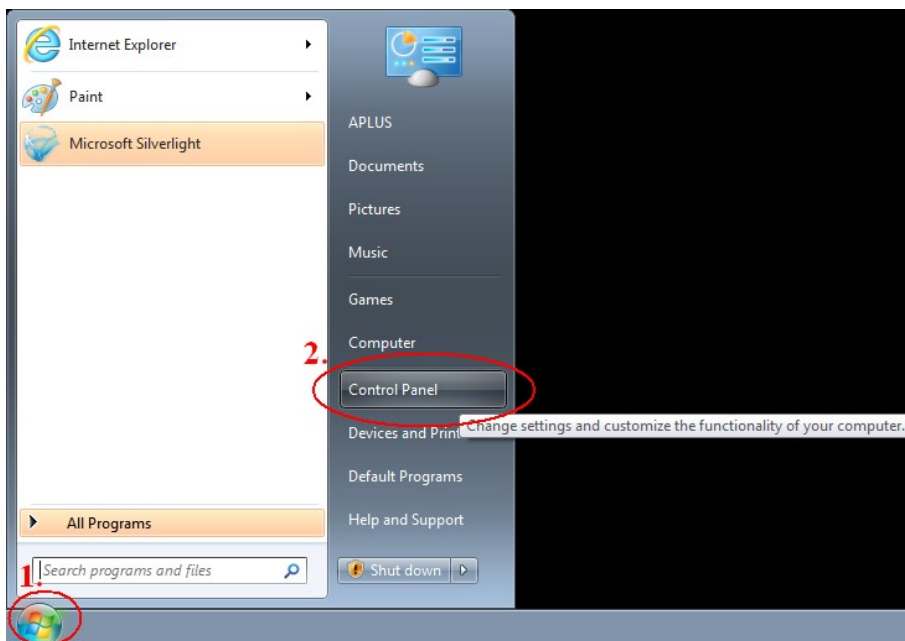


■ Install Driver In Windows 7

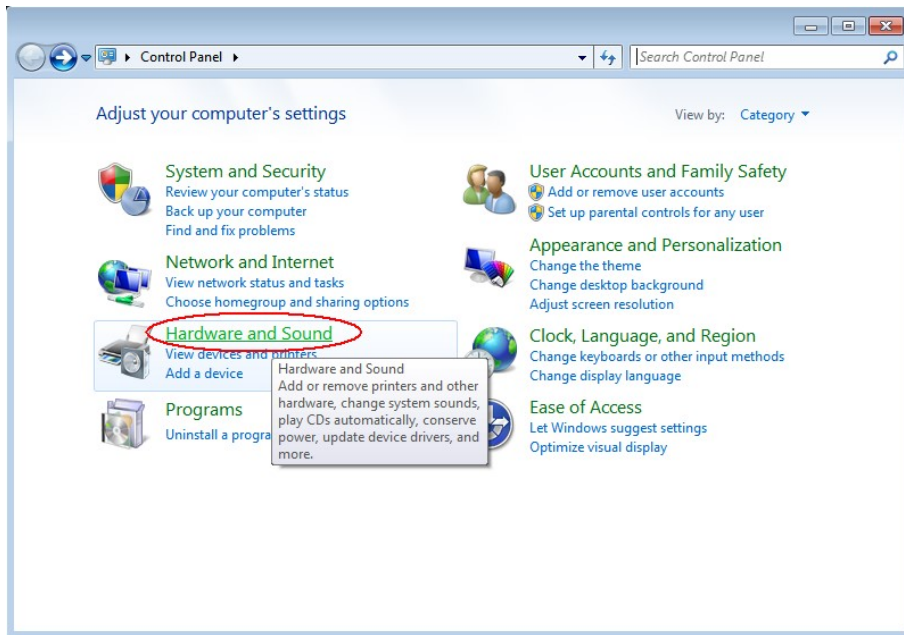
1. Connect aSPI28W to your computer by USB cable.



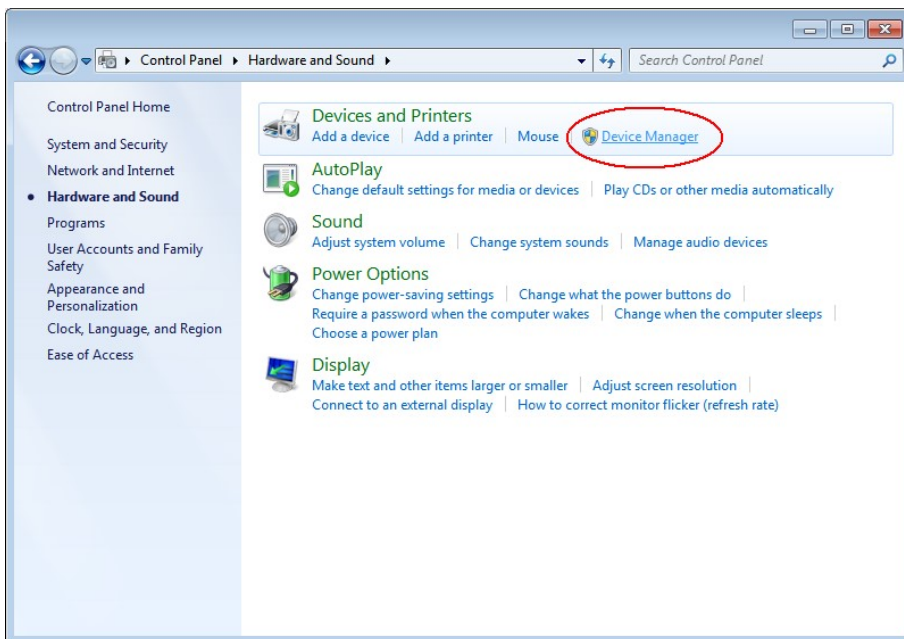
2. Click and follow below graph to open [Control Panel] .



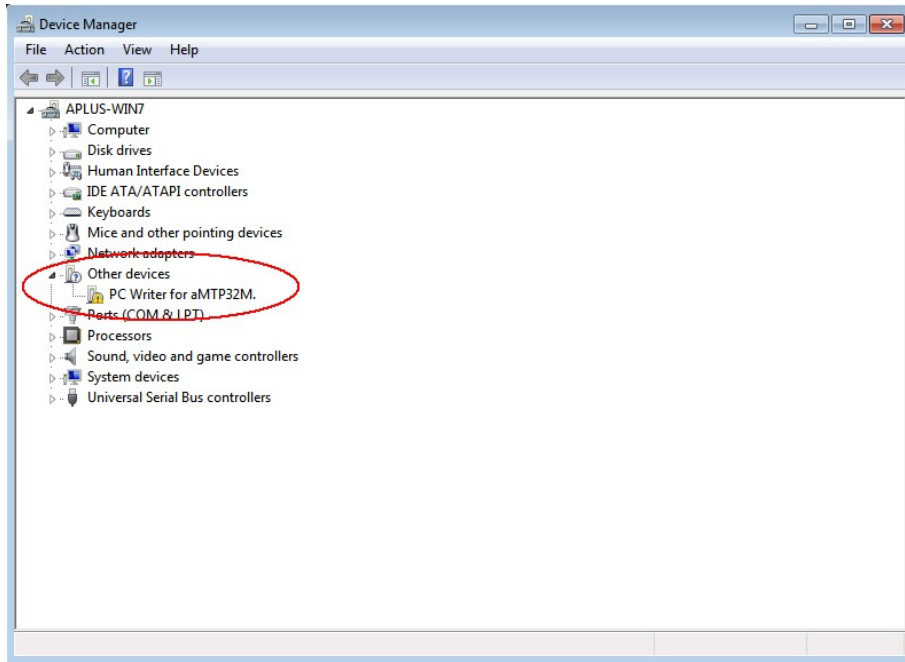
3. Click and follow below graph to open [Hardware and Sound] .



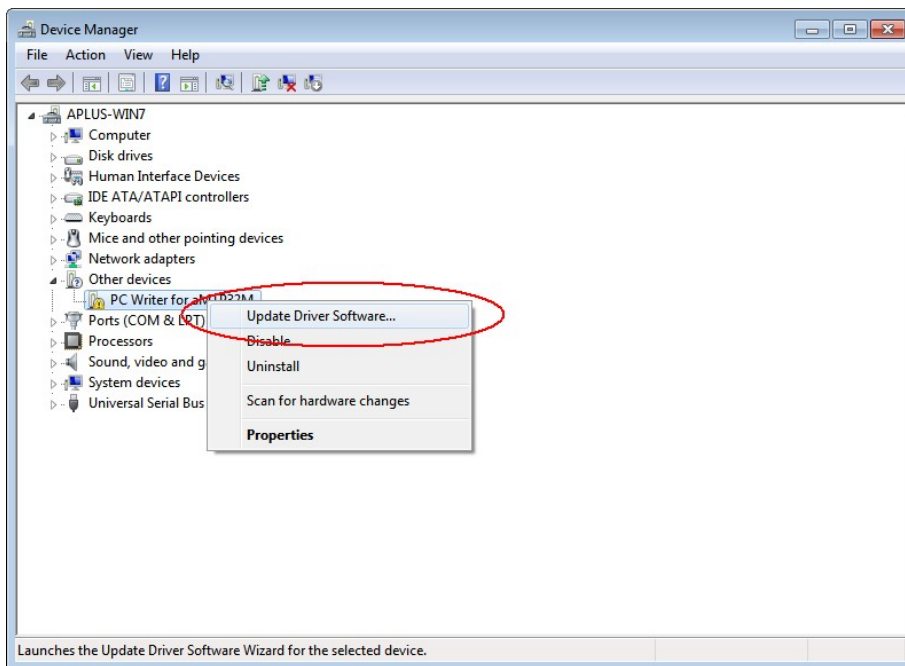
4. Click and follow below graph to open [Device Manager] .



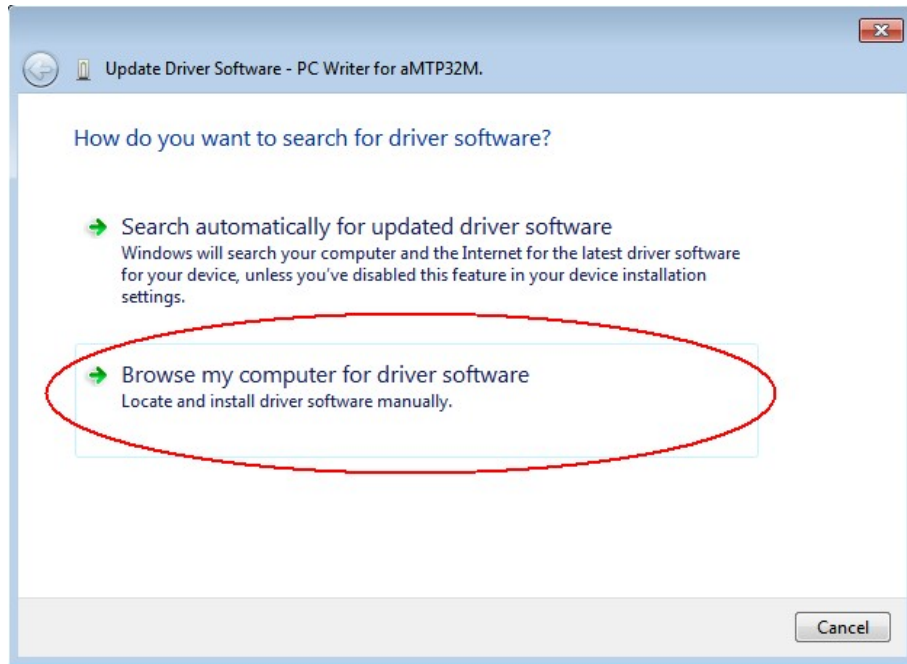
5. You can find aMTP32MK in the list.



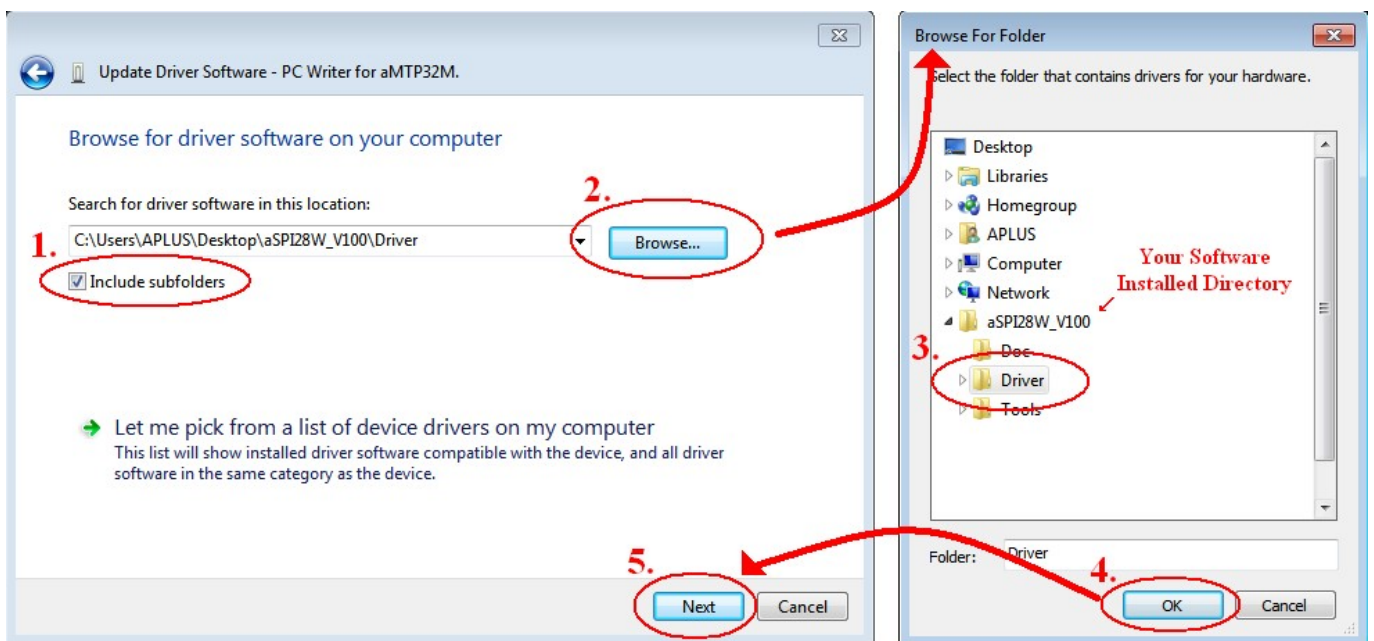
6. Right-click aMTP32MK icon, and click [Update Device Software...].



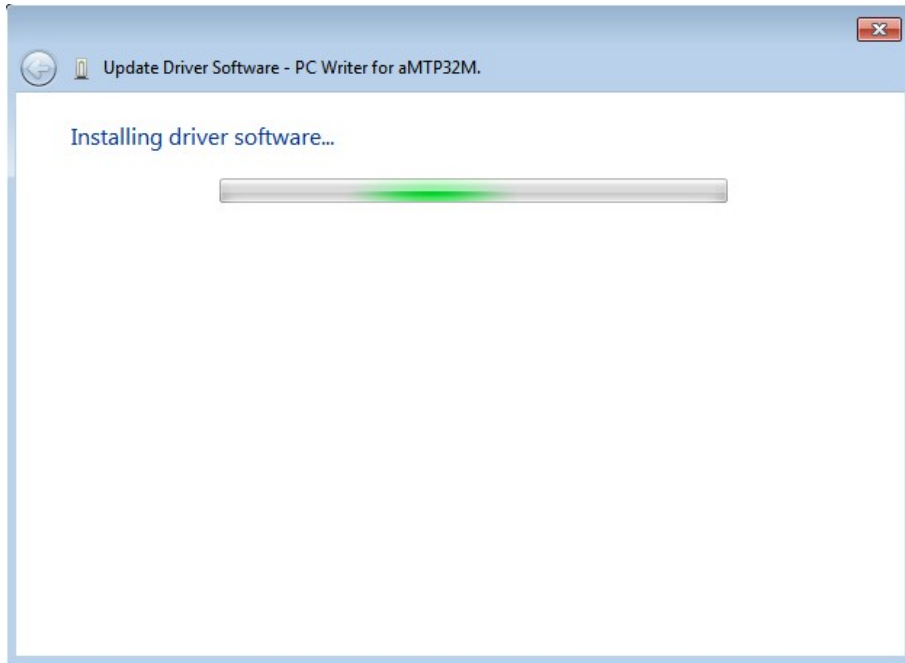
7. Click and follow below graph to install driver manually.



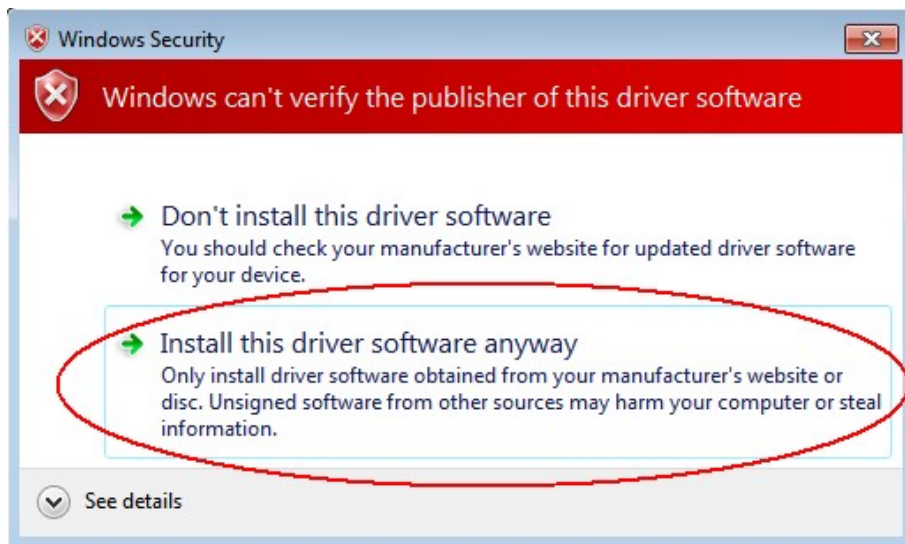
8. Select or click and follow below graph to assign the driver.



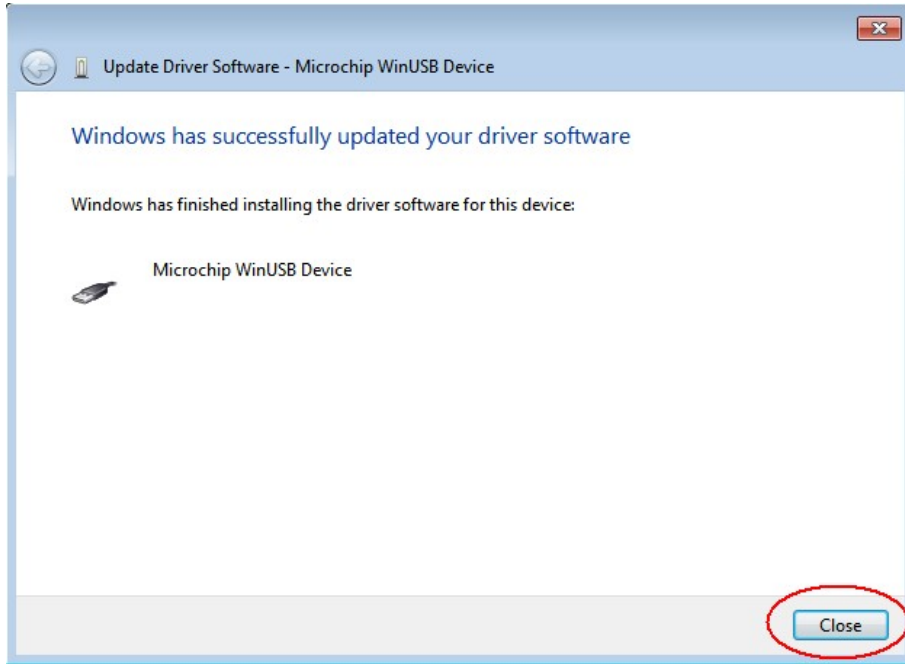
9. Windows will start to install driver to your PC.



10. When the driver install, if windows show the below message, please click [Install this driver software anyway] .

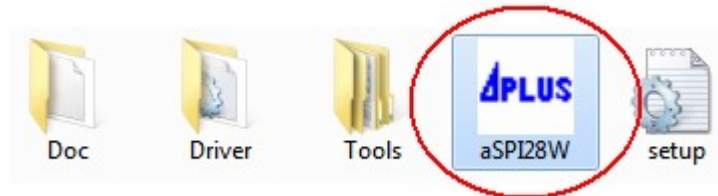


11. Click [Close] to end of install driver.

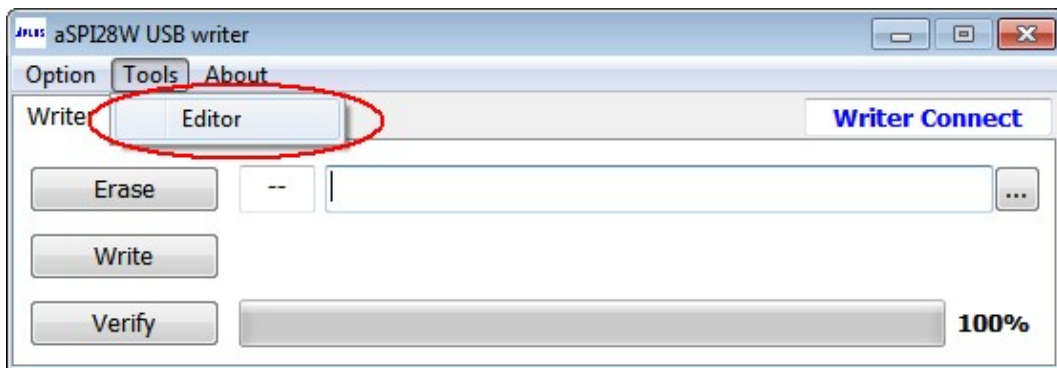


■ Build A Program Data

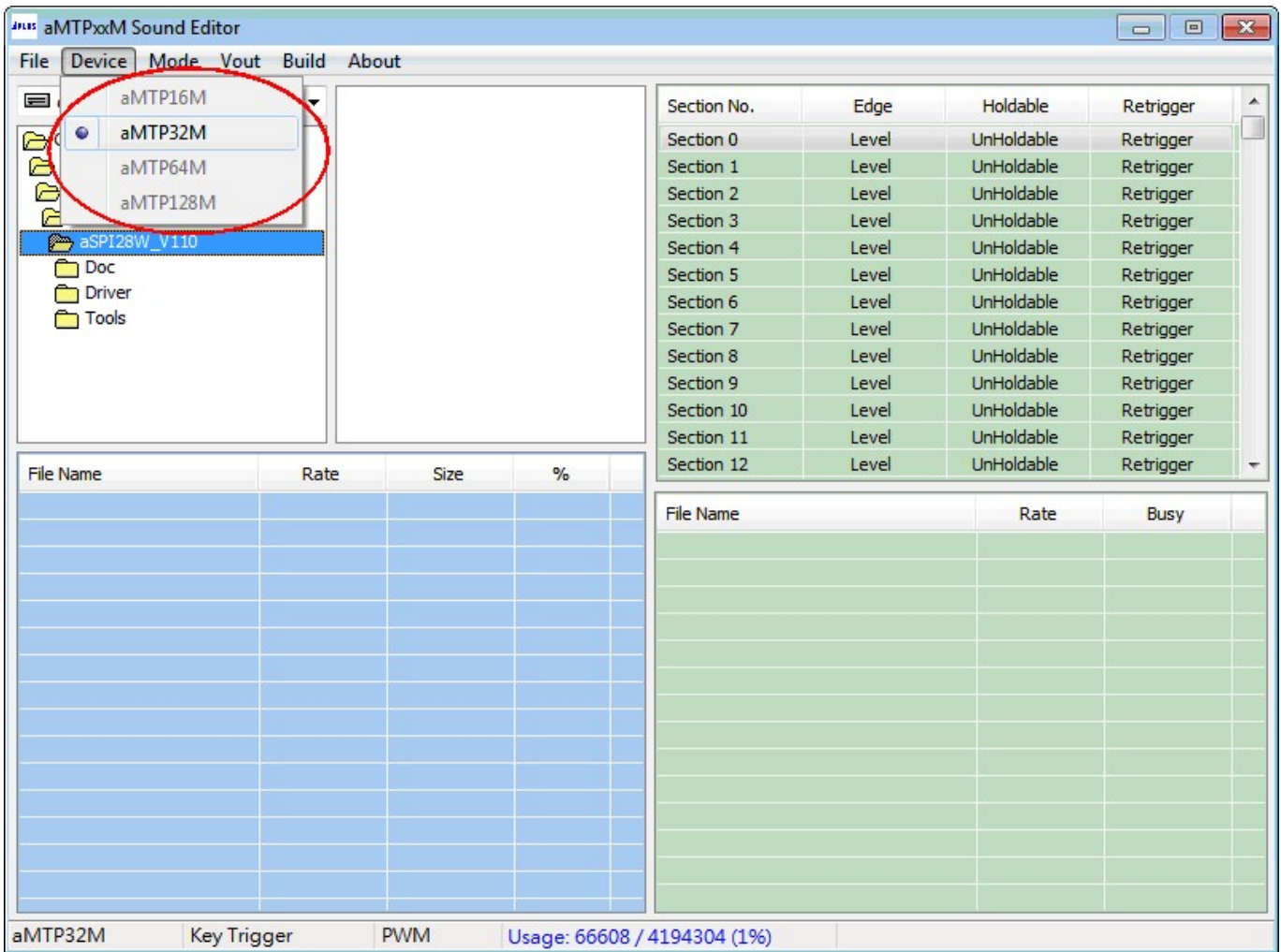
1. Double click aSPI28W icon to open software.



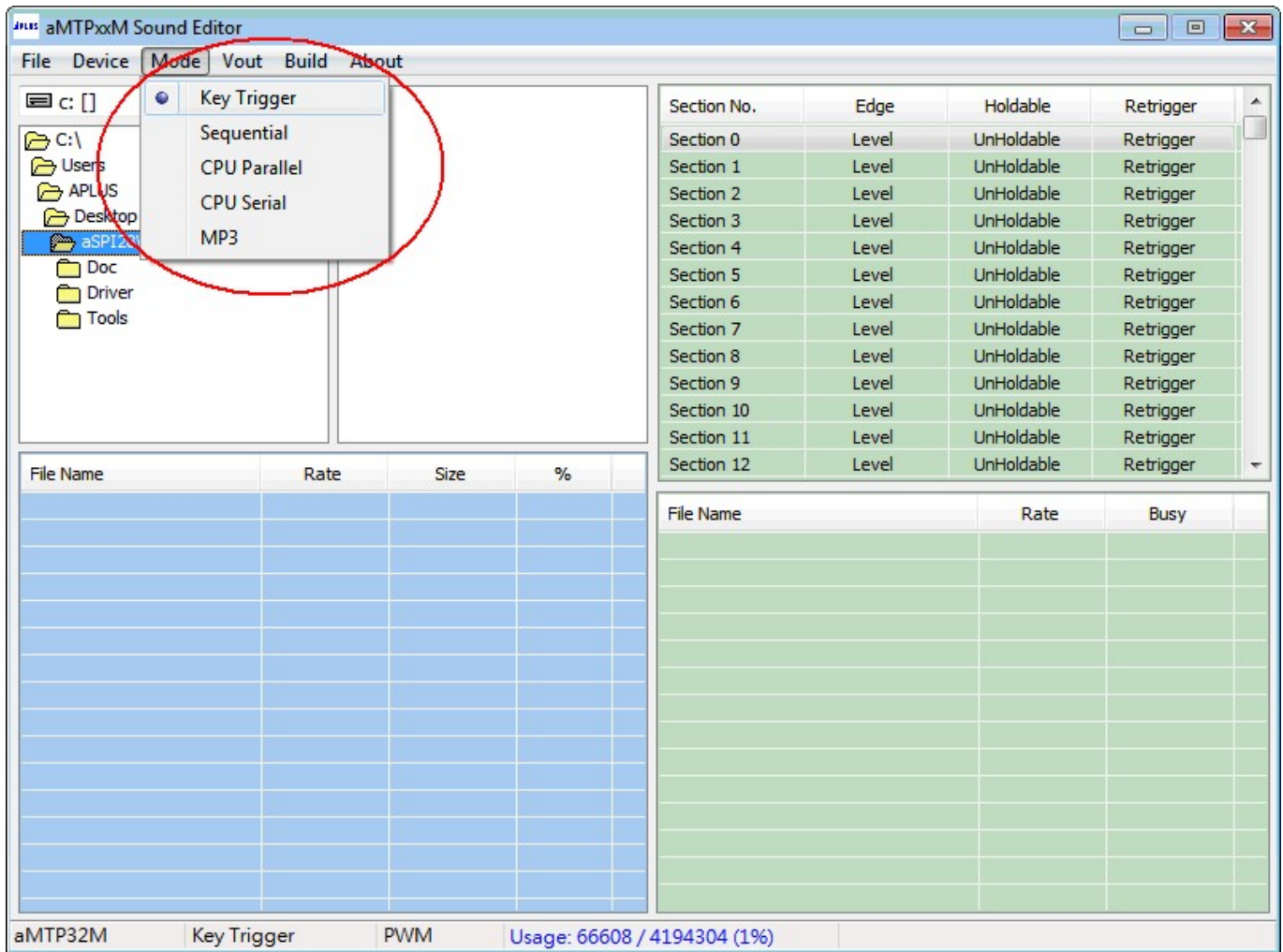
2. Click [Tools] → [Editor] to open “aMTP Series Sound editor”.



3. Click [Device] to select the device you want.

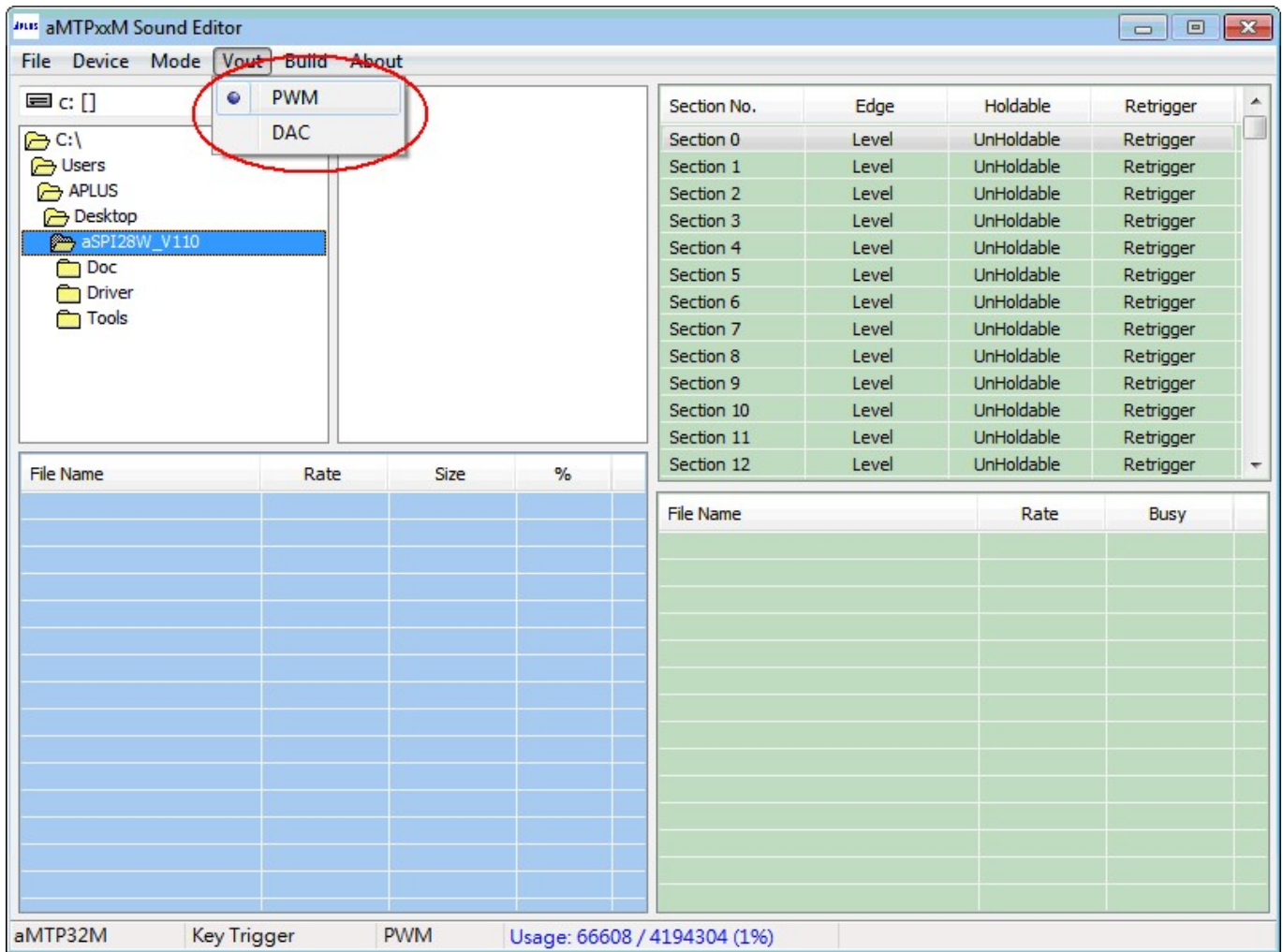


4. Click [Mode] to select the mode you want.



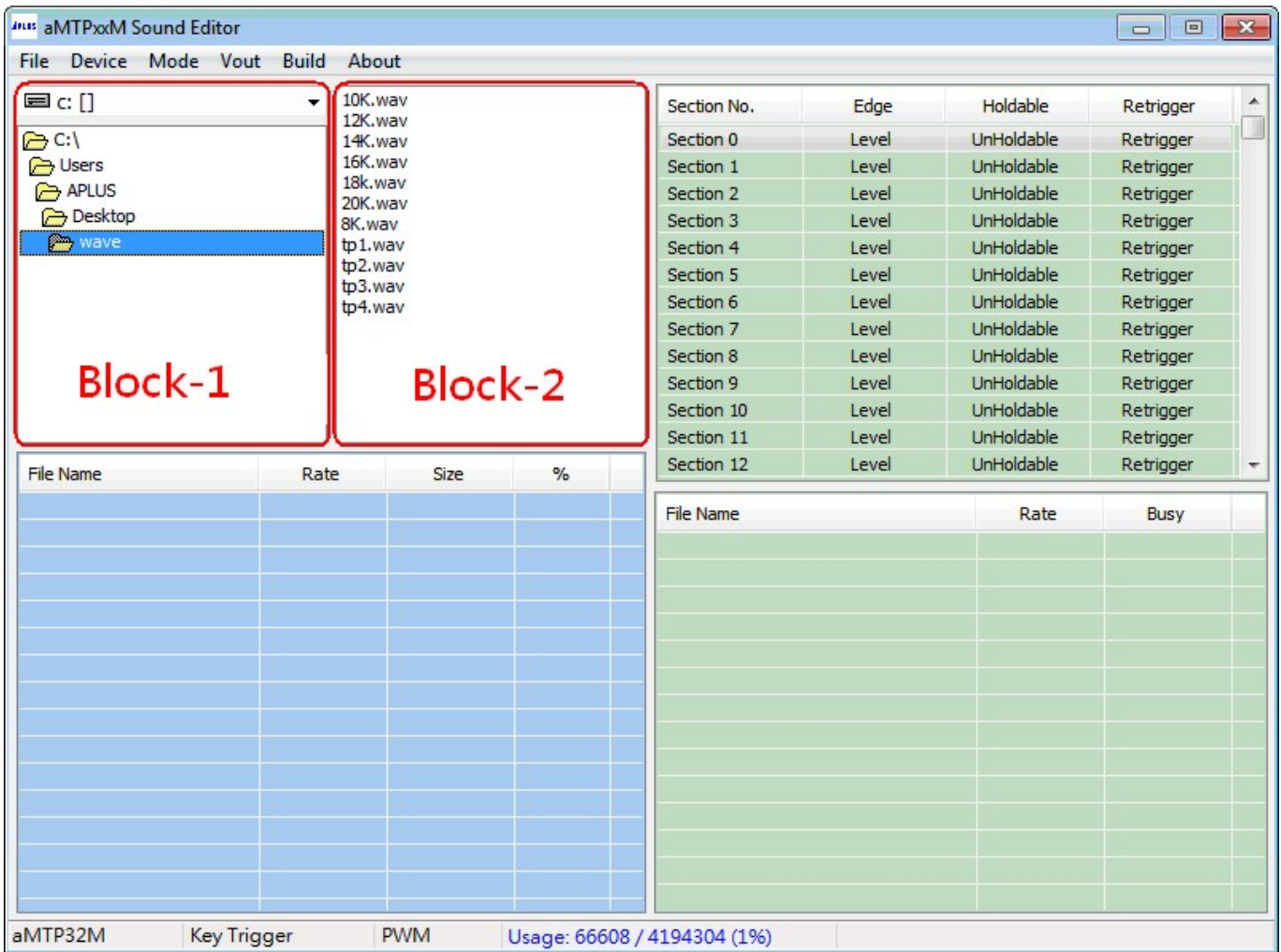
◆ More detailed description of “Mode”, please refer to aMTP32MK data sheet.

5. Click [Vout] to select the voice mode you want.

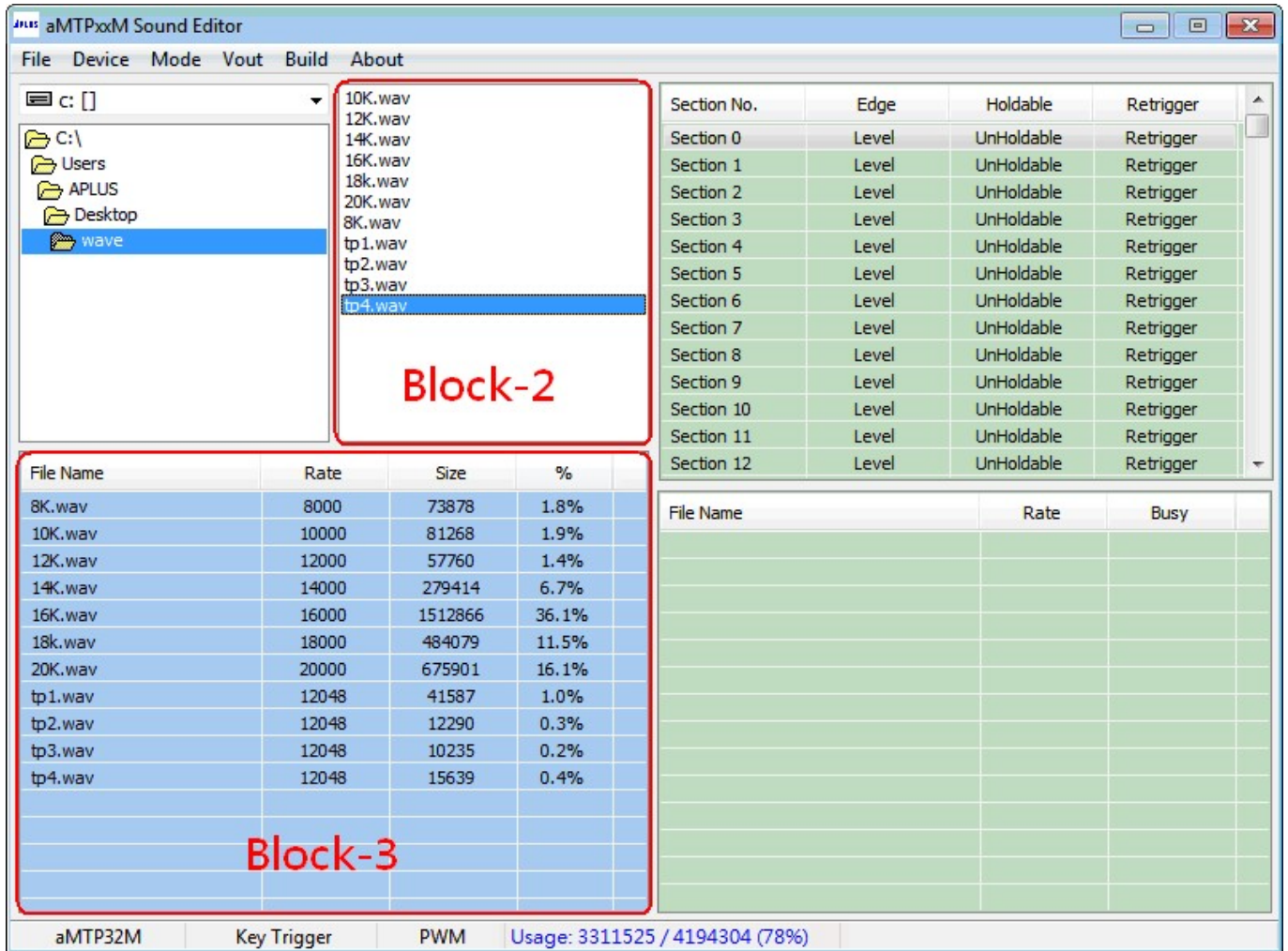


- ◆ PWM can directly drive speaker to save cost, but volume is smaller than DAC
- ◆ DAC need external amplifier to driver speaker. The volume depends on the amplifier and louder than PWM.
- ◆ More detailed description of DAC or PWM, please refer to aMTP32MK data sheet.

6. Use Block-1 to select a directory, and Block-2 will list all of wave file in this directory.

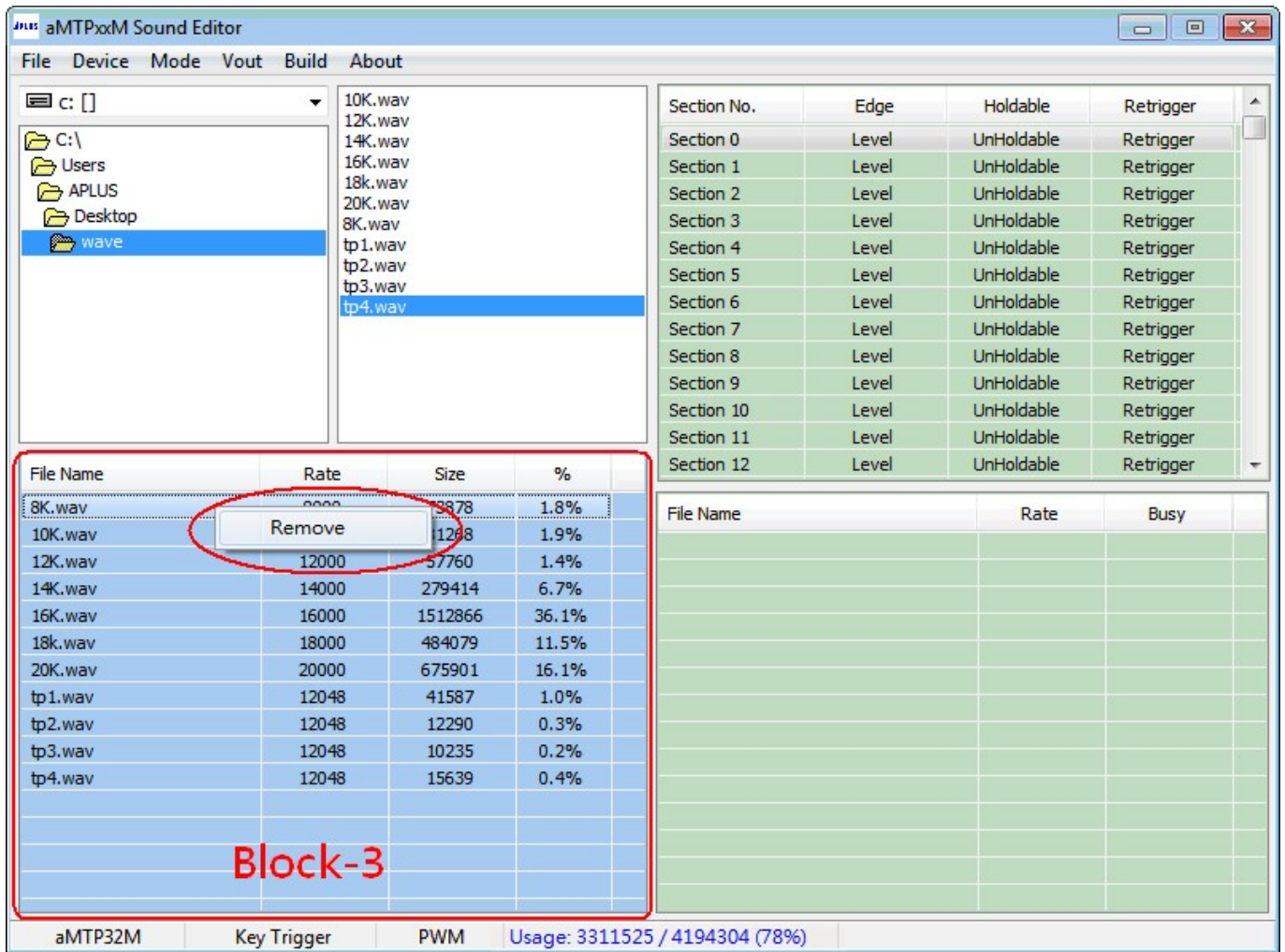


7. Double click file name in Block-2 to assign file into Block-3. Only Block-3 files will occupy memory space.



◆ The wave file must be 8-bit, mono format, and less then 20KHz sampling rate.

8. You can right-click a file name in Block-3 and click [Remove] to remove it.



- Selected a section in Block-4 and assign waves by double click file name in Block-3, Block-5 will show Block-3 assigned files played in Block-4 sections.

The screenshot shows the 'aMTPxxM Sound Editor' window. It features a file explorer on the left, a list of audio files in the center, a section configuration table on the right, and two detailed tables at the bottom. Red boxes and labels identify 'Block-3' (the file list table), 'Block-4' (the section configuration table), and 'Block-5' (the busy status table).

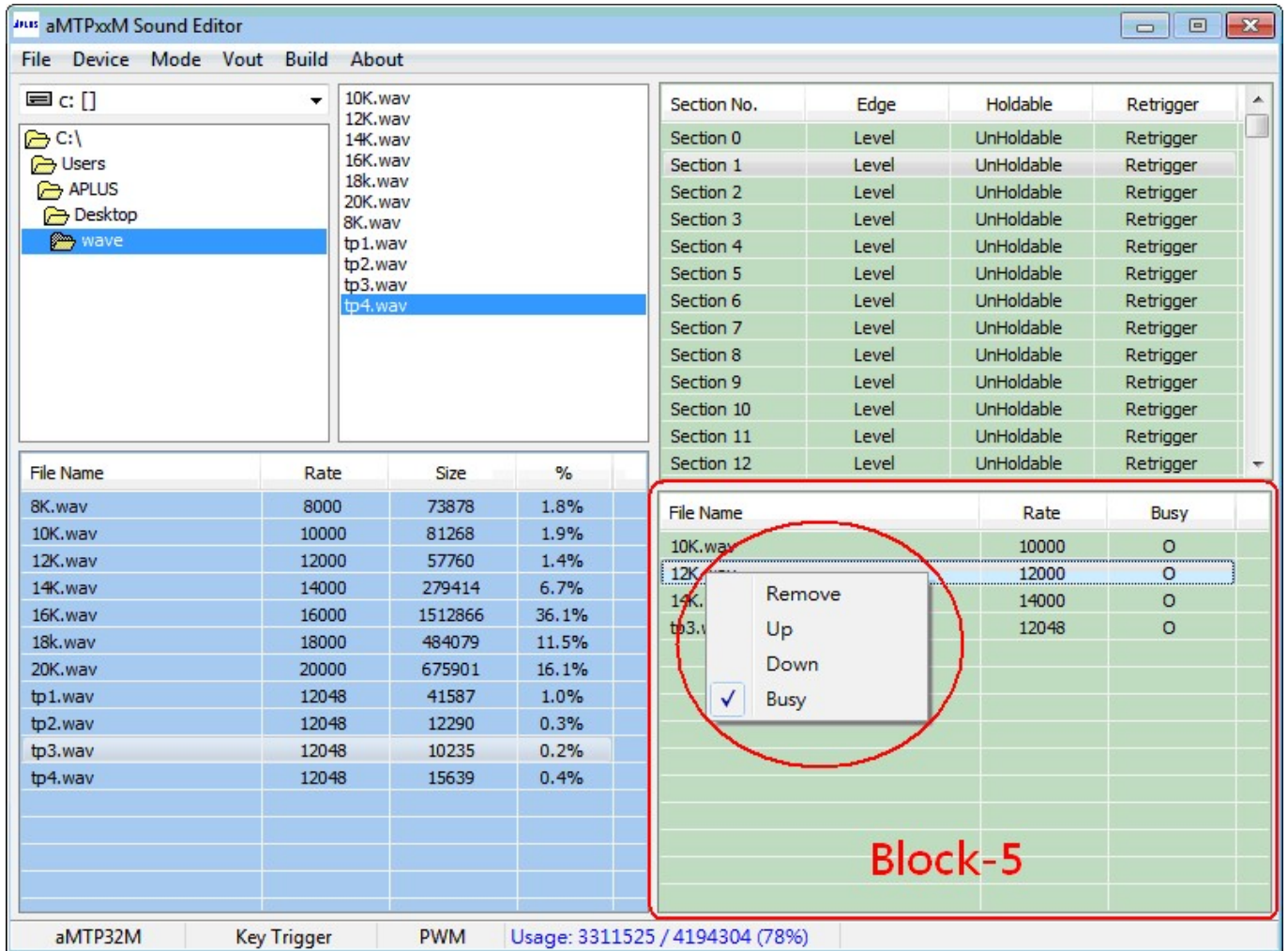
Section No.	Edge	Holdable	Retrigger
Section 0	Level	UnHoldable	Retrigger
Section 1	Level	UnHoldable	Retrigger
Section 2	Level	UnHoldable	Retrigger
Section 3	Level	UnHoldable	Retrigger
Section 4	Level	UnHoldable	Retrigger
Section 5	Level	UnHoldable	Retrigger
Section 6	Level	UnHoldable	Retrigger
Section 7	Level	UnHoldable	Retrigger
Section 8	Level	UnHoldable	Retrigger
Section 9	Level	UnHoldable	Retrigger
Section 10	Level	UnHoldable	Retrigger
Section 11	Level	UnHoldable	Retrigger
Section 12	Level	UnHoldable	Retrigger

File Name	Rate	Size	%
8K.wav	8000	73878	1.8%
10K.wav	10000	81268	1.9%
12K.wav	12000	57760	1.4%
14K.wav	14000	279414	6.7%
16K.wav	16000	1512866	36.1%
18k.wav	18000	484079	11.5%
20K.wav	20000	675901	16.1%
tp1.wav	12048	41587	1.0%
tp2.wav	12048	12290	0.3%
tp3.wav	12048	10235	0.2%
tp4.wav	12048	15639	0.4%

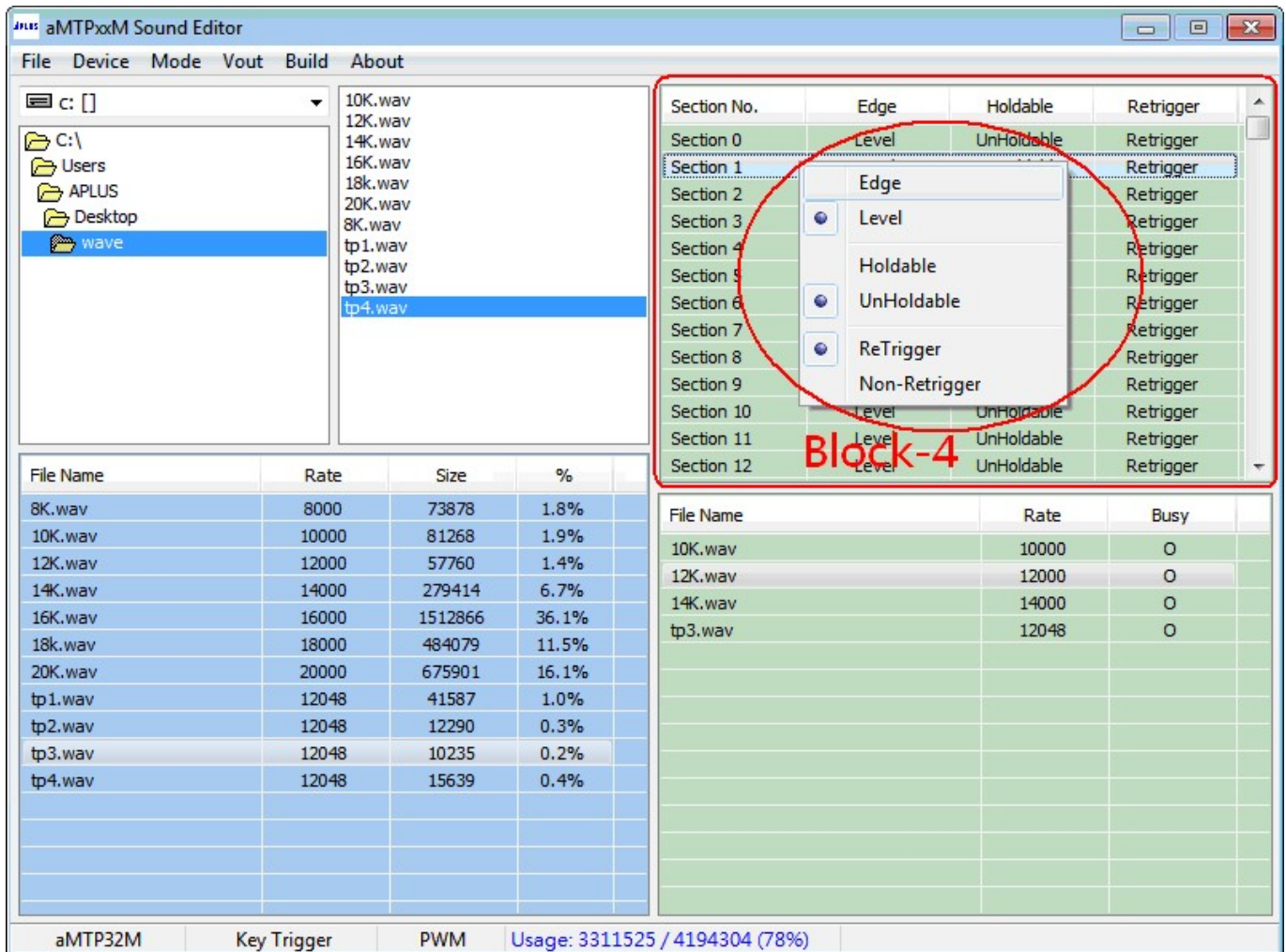
File Name	Rate	Busy
10K.wav	10000	0
12K.wav	12000	0
14K.wav	14000	0
tp3.wav	12048	0

- ◆ In this example, when you trigger Section 1, the chip will play :
10K.wav + 12K.wav + 14K.wav + tp3.wav

10. You can right-click or double click a file name in Block-5 and click button to remove, change sequence or choose the Busy pin output when played.

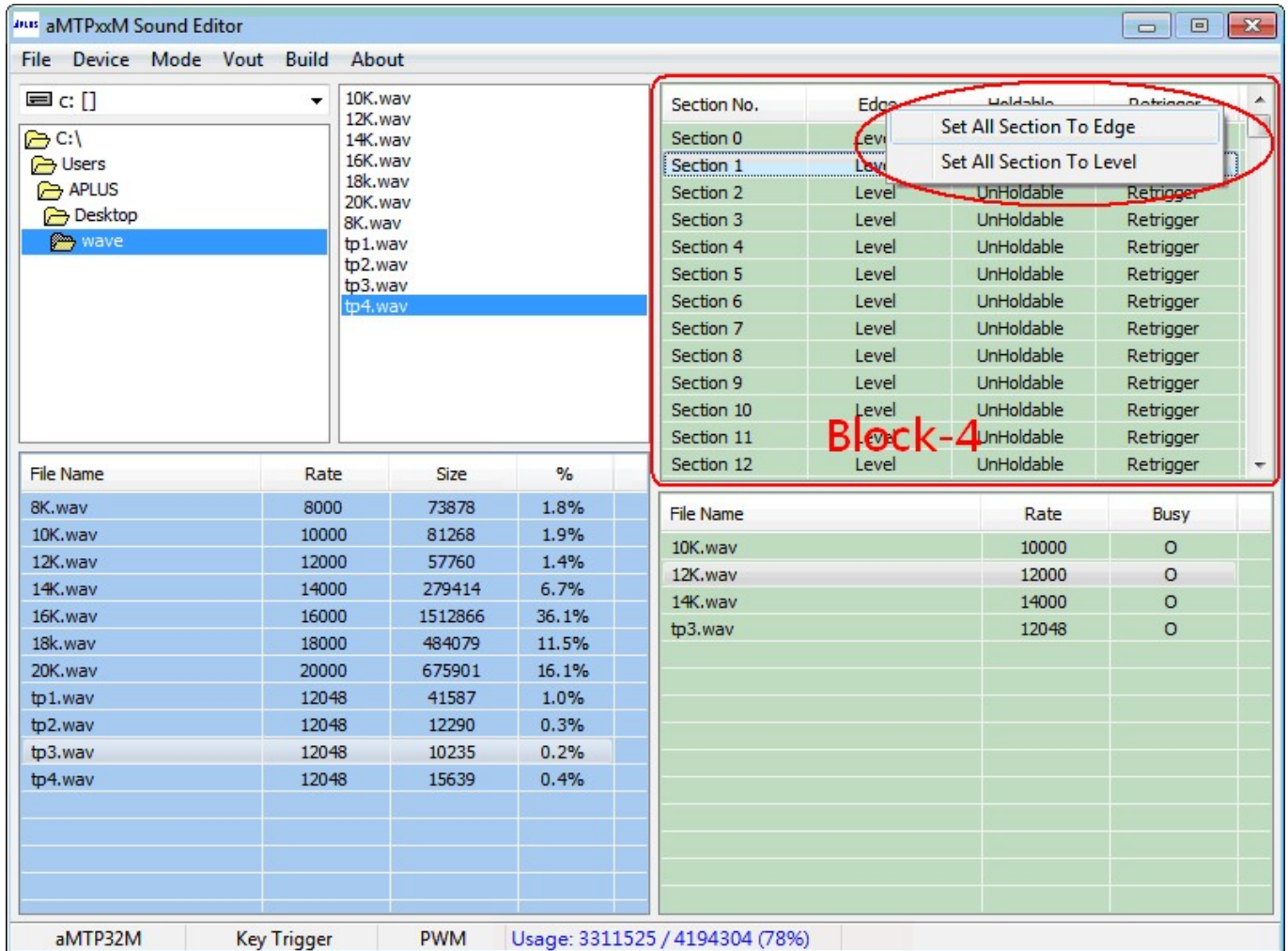


11. You can right-click or double click a section in Block-4 and click button to choose edge, holdable and re-trigger function .

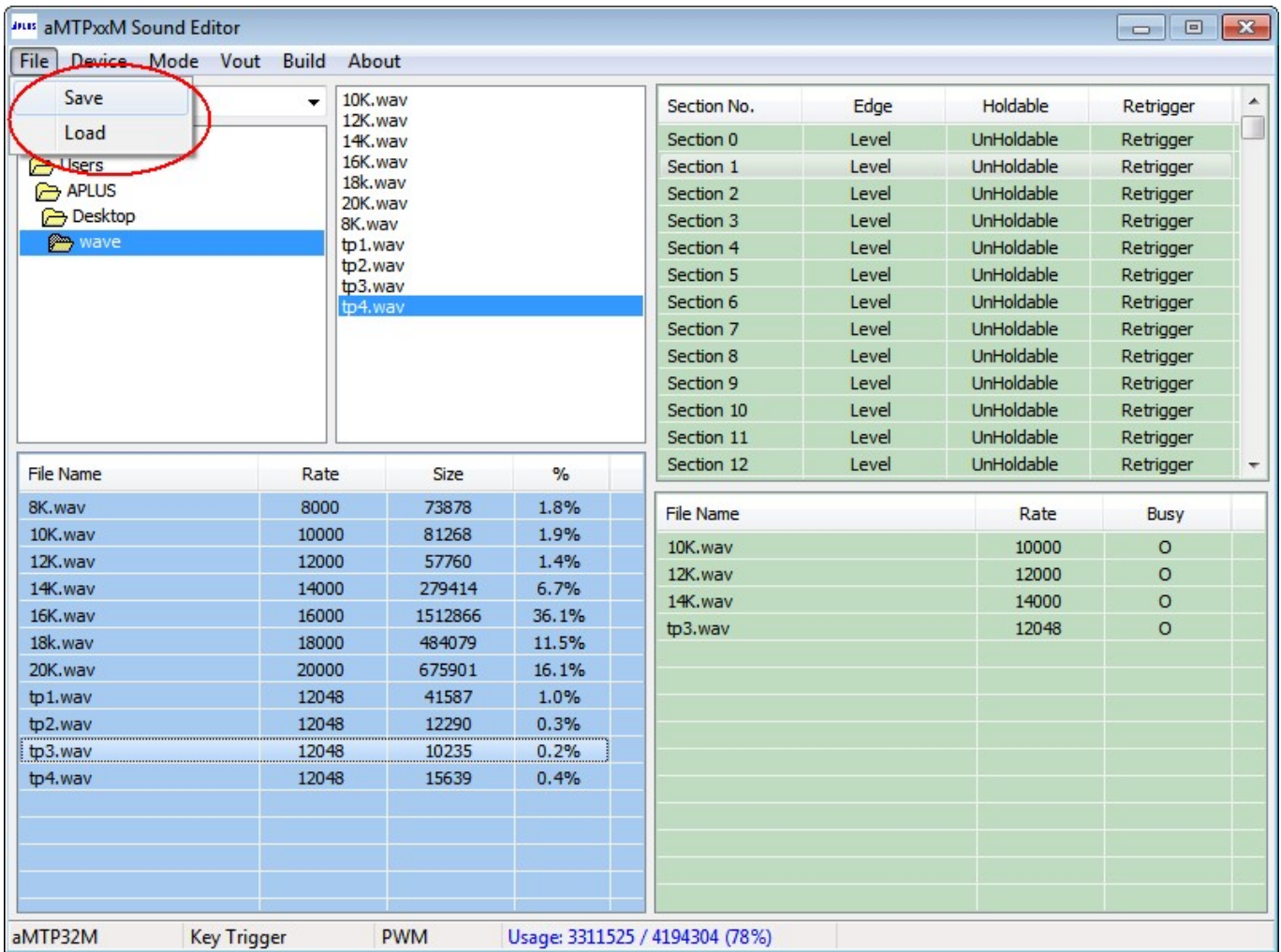


- ◆ More detailed description of “Edge”, “Holdable” and “Re-Trigger”, please refer to aMTP32MK data sheet.

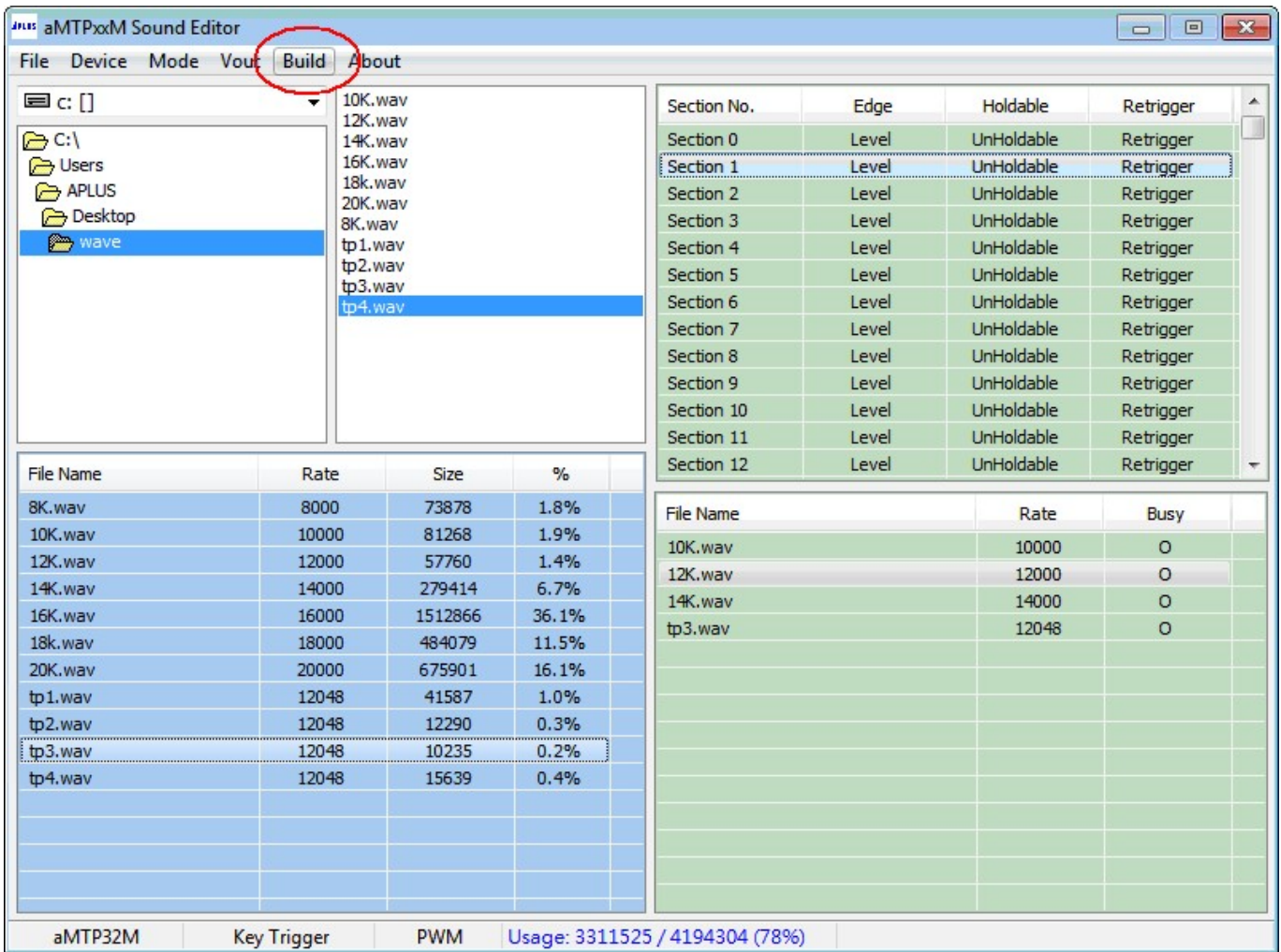
12. You can also click top entry [Edge], [Holdable] or [Retrigger] in Block-4 to choose a trigger function for all sections.



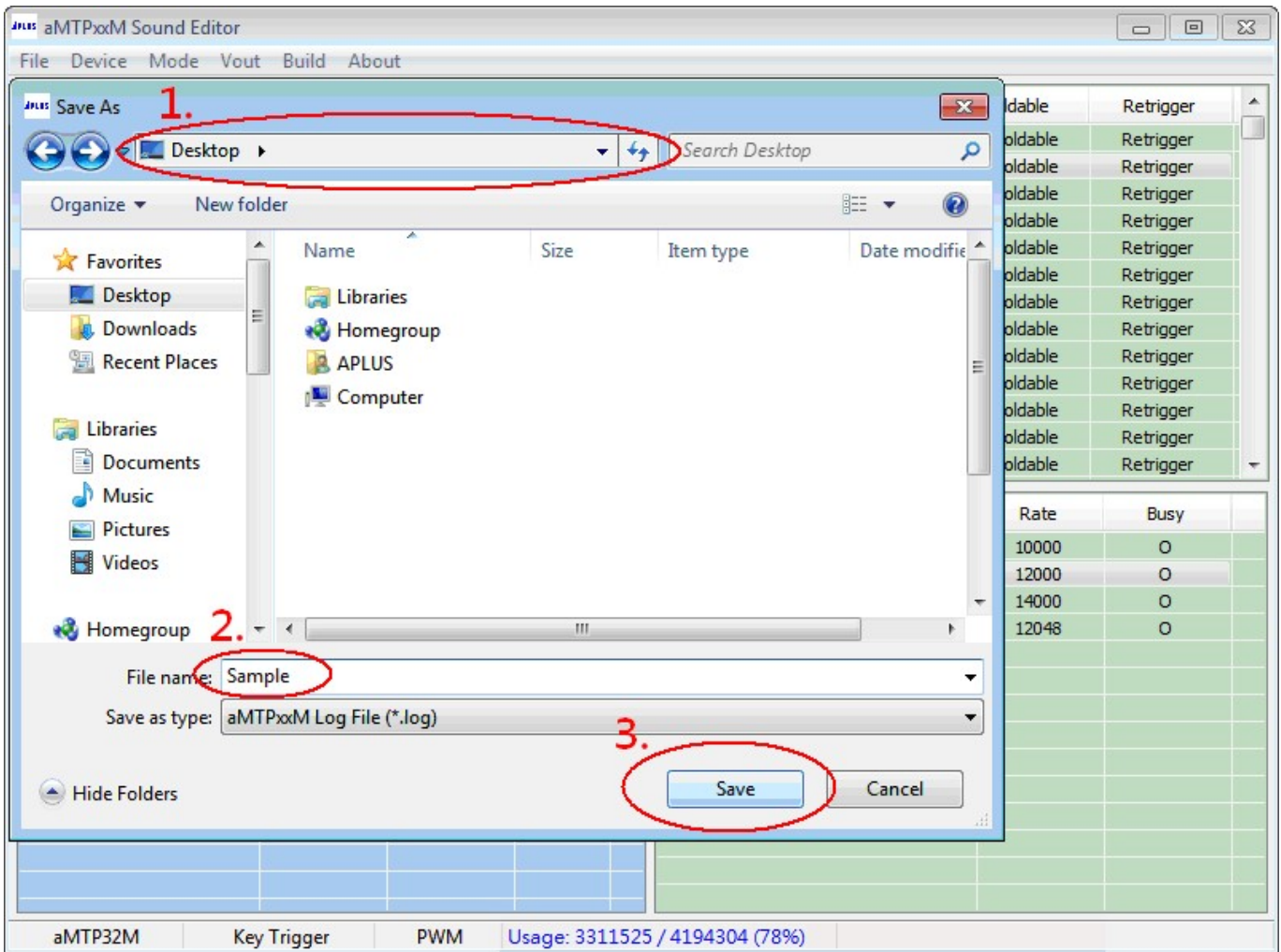
13. You can use [File] → [Save] / [Load] to save current editing or load previous editing..



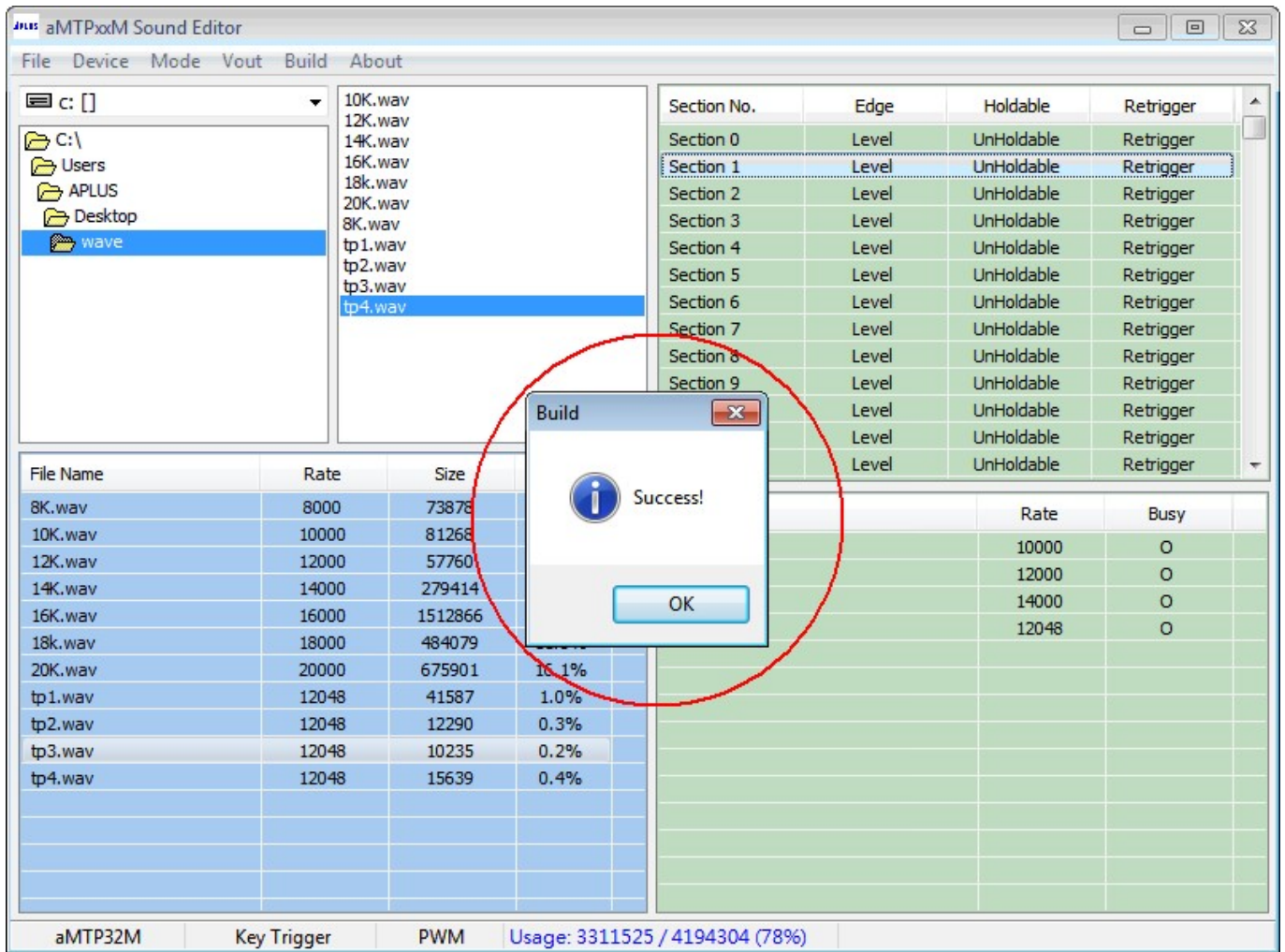
14. When you finish edit, use [Build] to build a program file.



15. Select a directory, and give it a name to save it.



16. Wait few seconds, software will show build result.

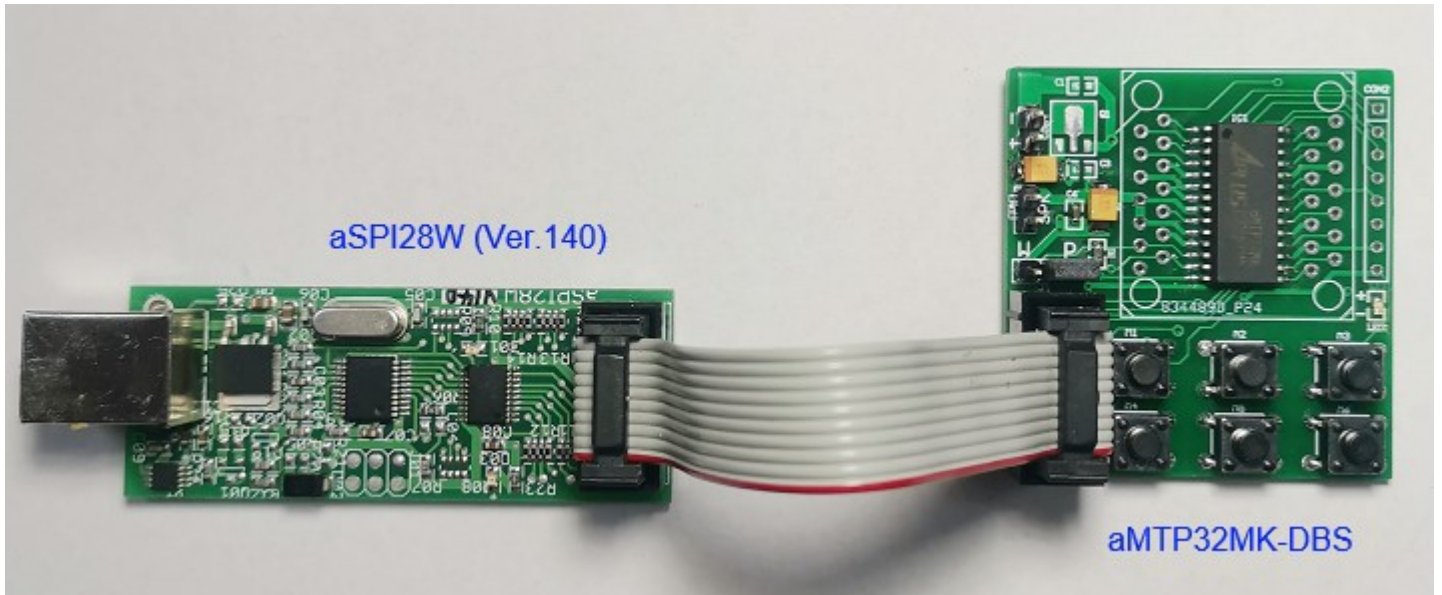


17. You will get a program data (*.data), and function table (*.log) as below :

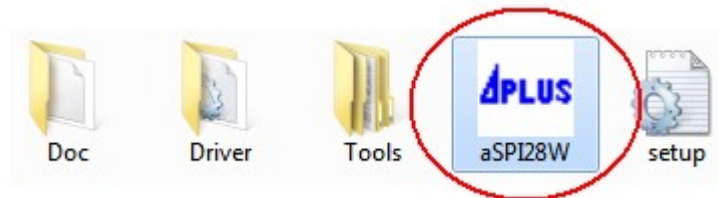


■ Program Data To aMTPxxMK-DBS

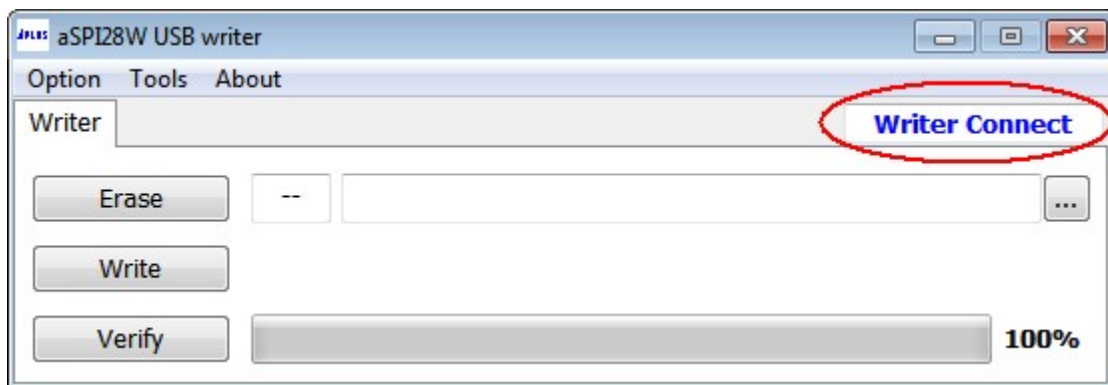
1. Connect aSPI28W USB writer to the demo board aMTPxxMK-DBS



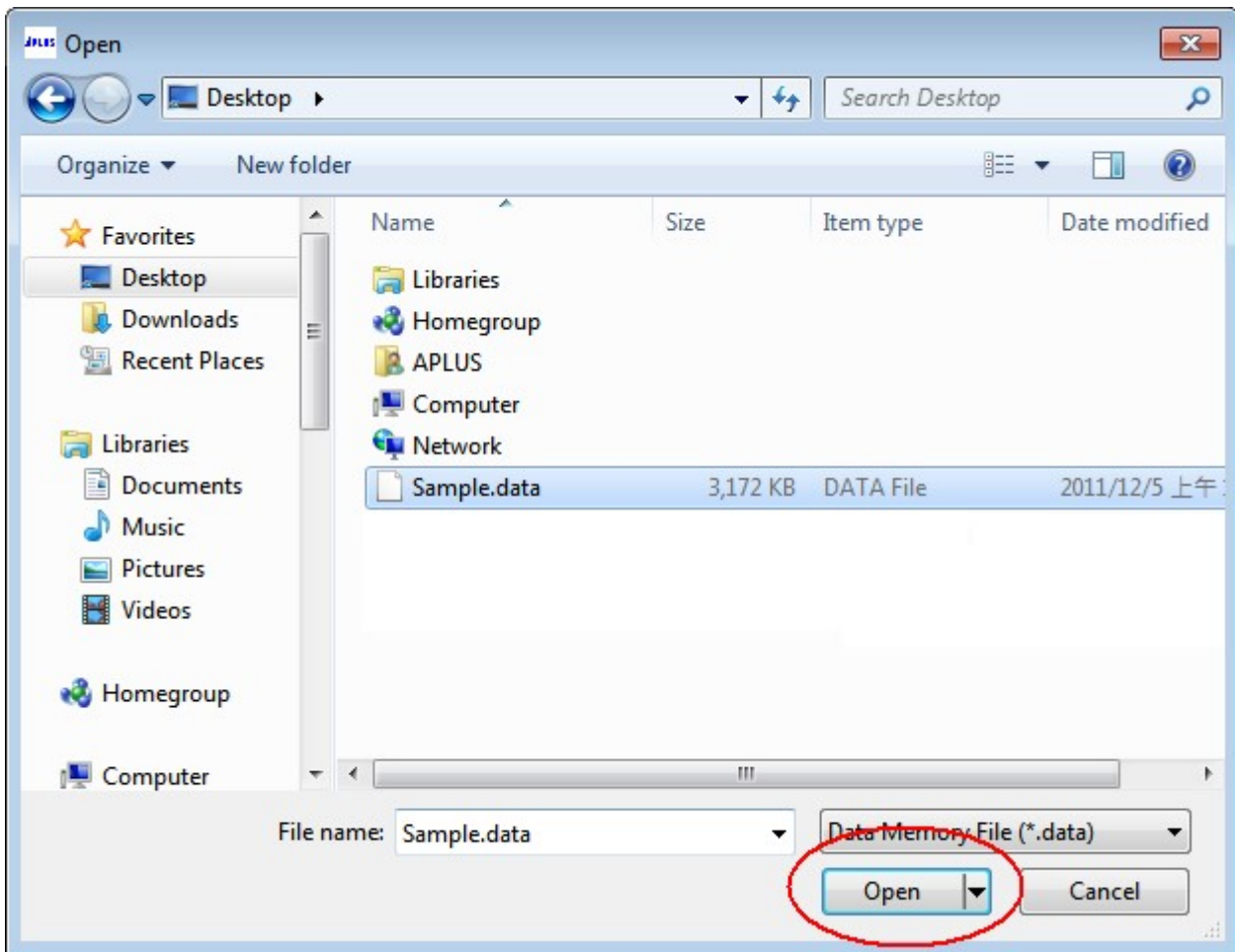
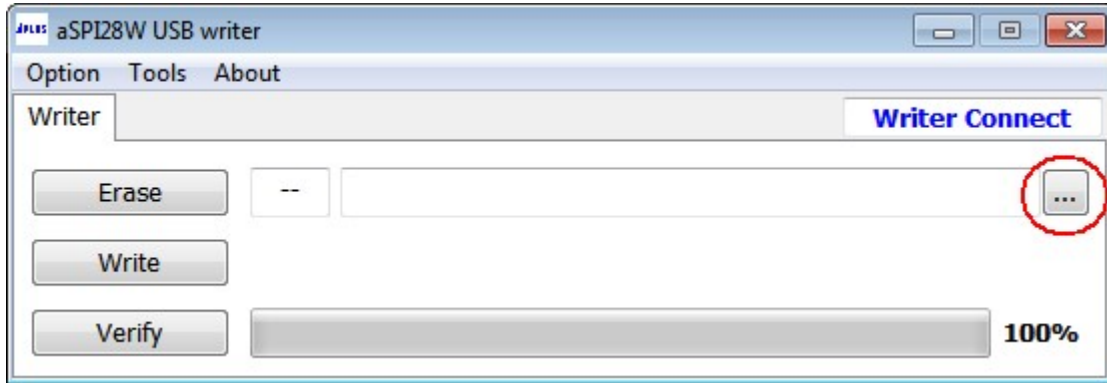
2. Double click aSPI28W icon to open software.



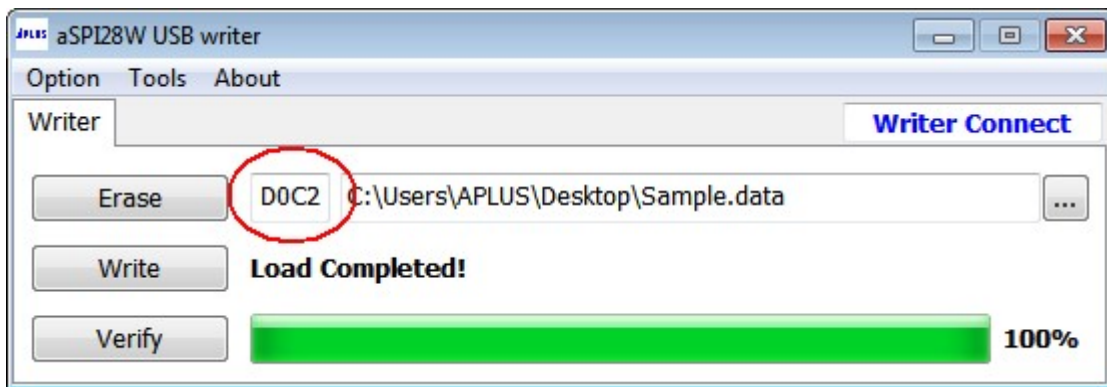
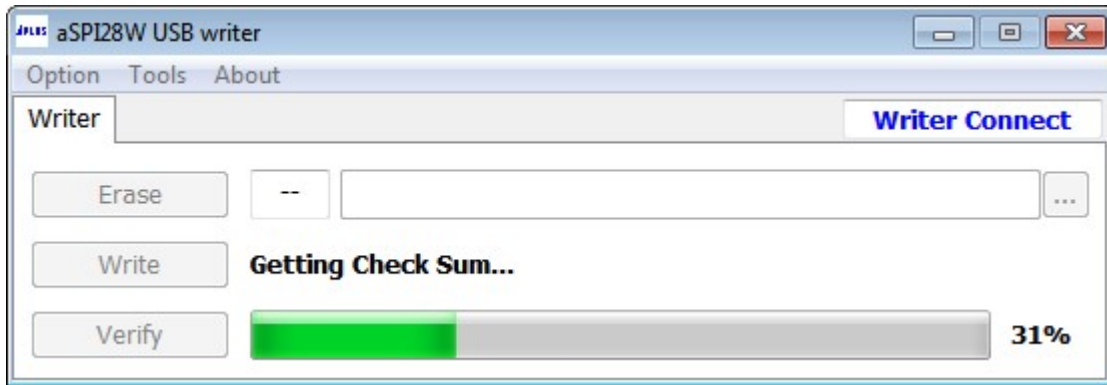
3. Check writer already connected.



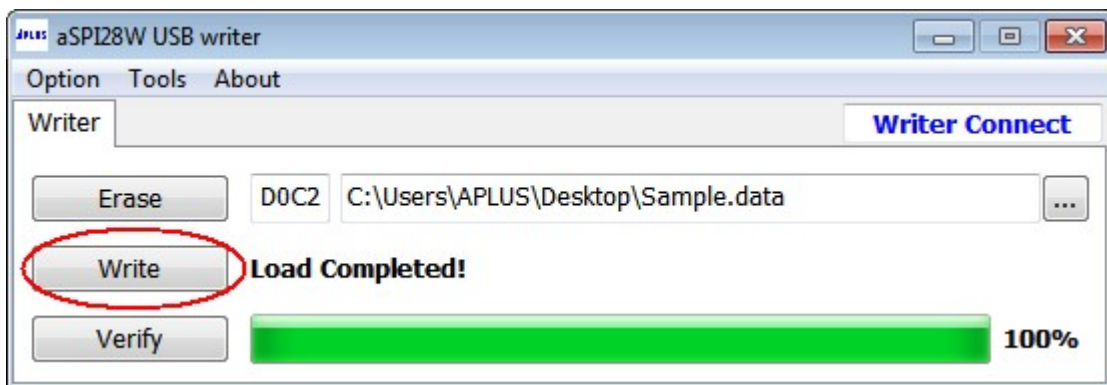
4. Click [...] to load a aMTPxxMK program file (*.data).



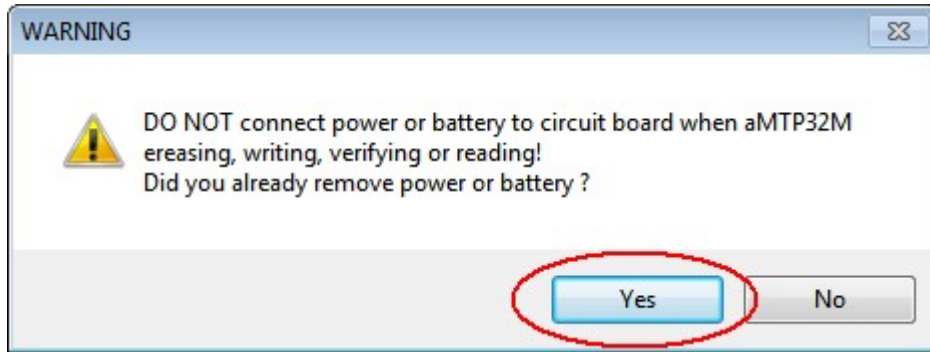
5. Software will get programmed file check sum , then show on the file path left.



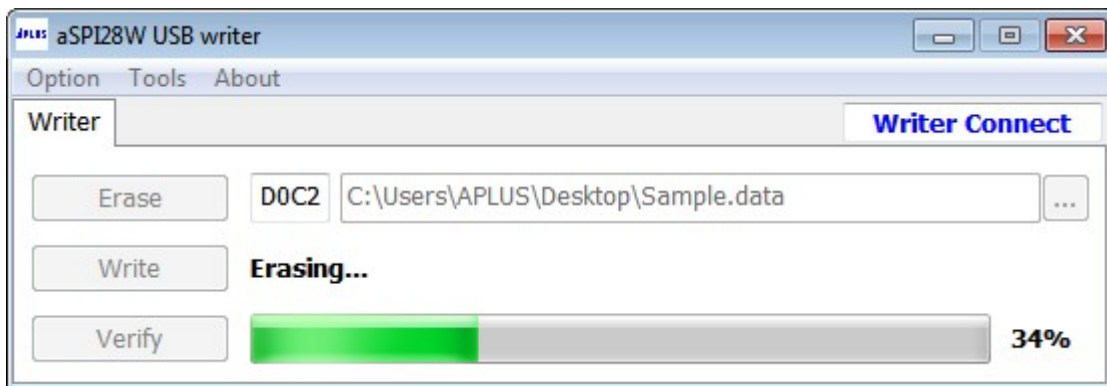
6. Click [Write] to program the file to aMTPxxMK chip.



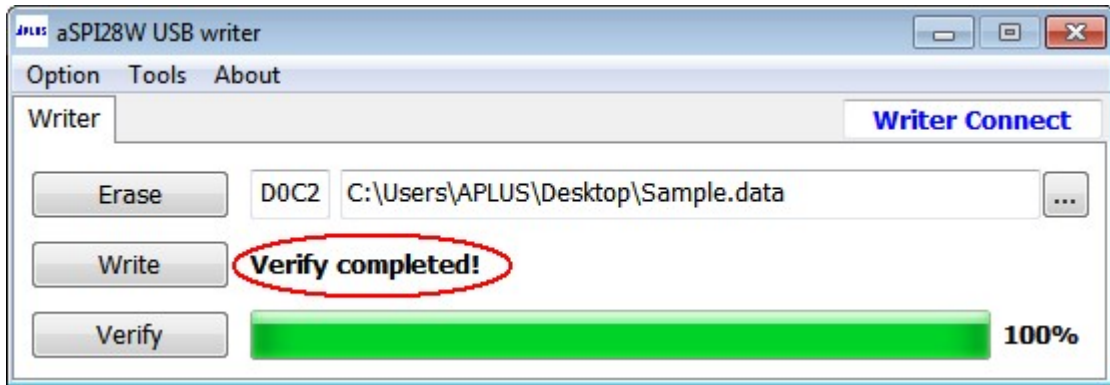
7. Check power or battery already removed, then click [Yes] .



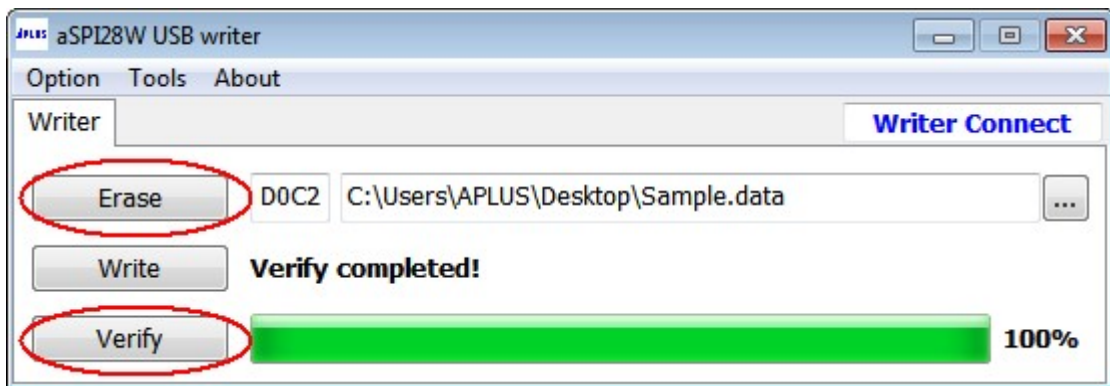
8. Software will start to erase, program and verify automatically.



9. When write successfully , software will show “Verify completed”.



10. You can do erase or verify only by [Erase] or [Verify] .

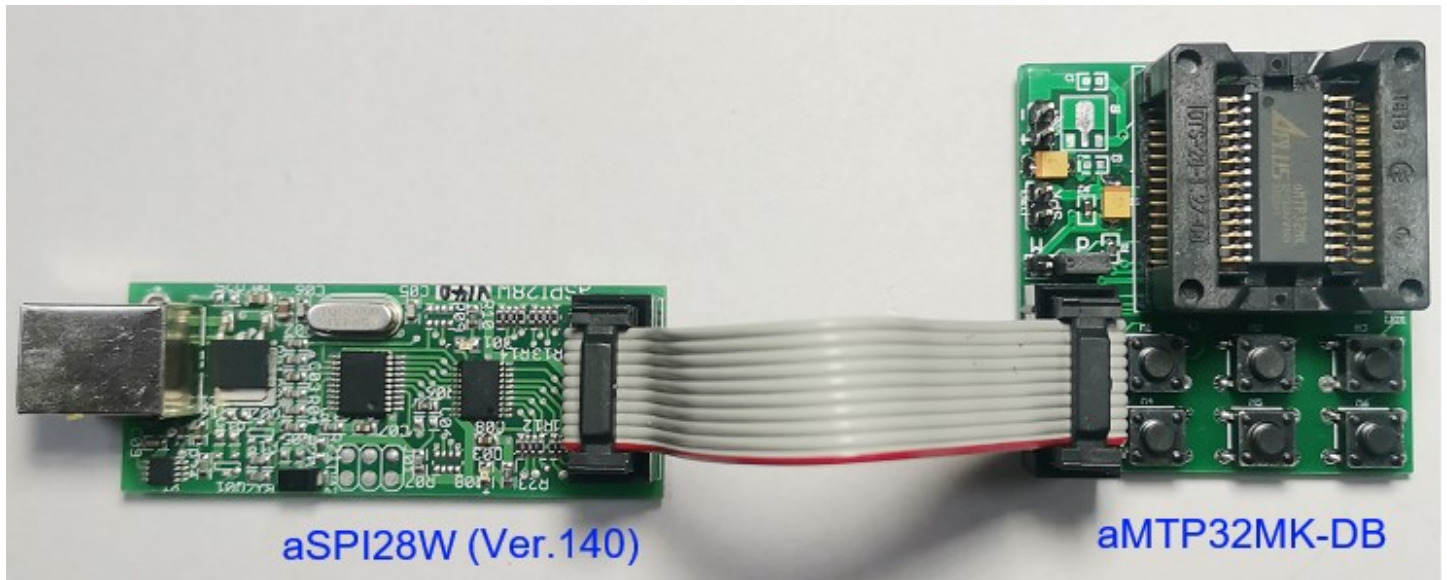


11. Now, you can remove aSPI28W USB writer , connecting power and speaker to play . About how to use aMTPxxMK-DBS, please refer [aMTPxxMK-DBS user guide] .

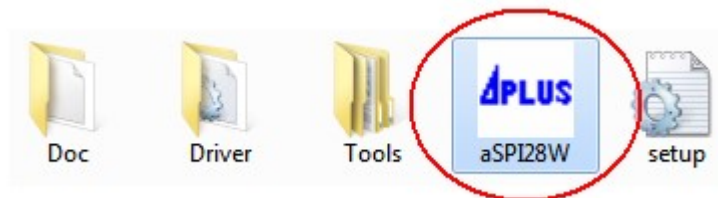
■ **Program Data To aMTPxxMK**

■

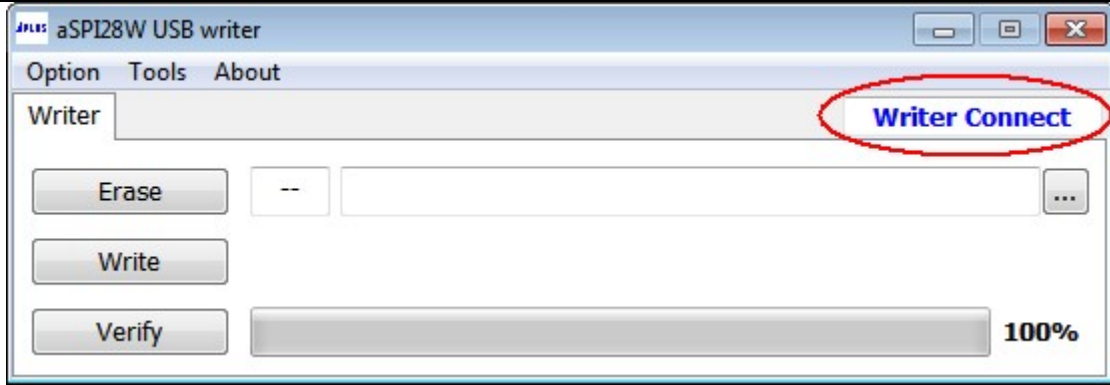
1. Connect aSPI28W USB writer to the demo board aMTPxxMK-DB.



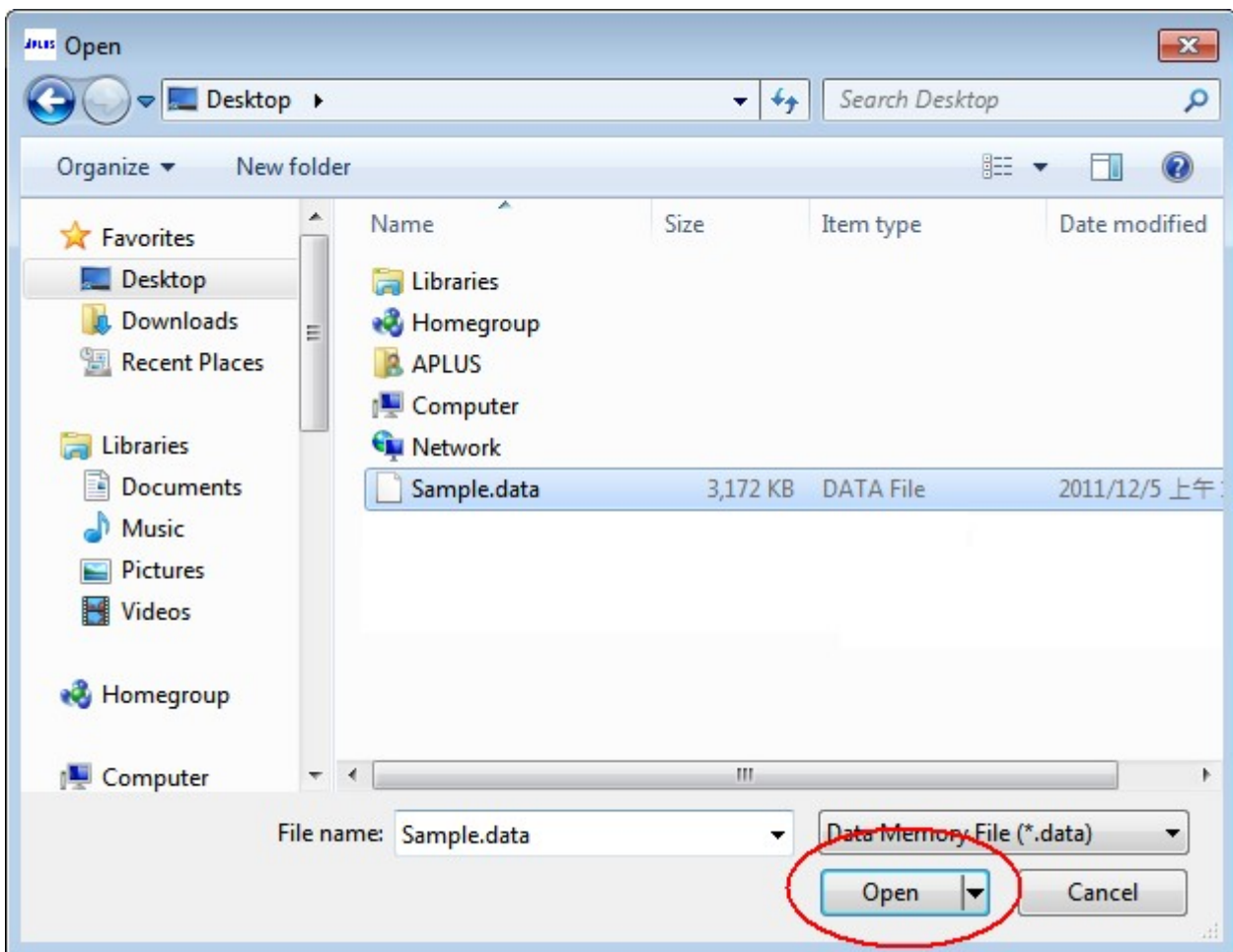
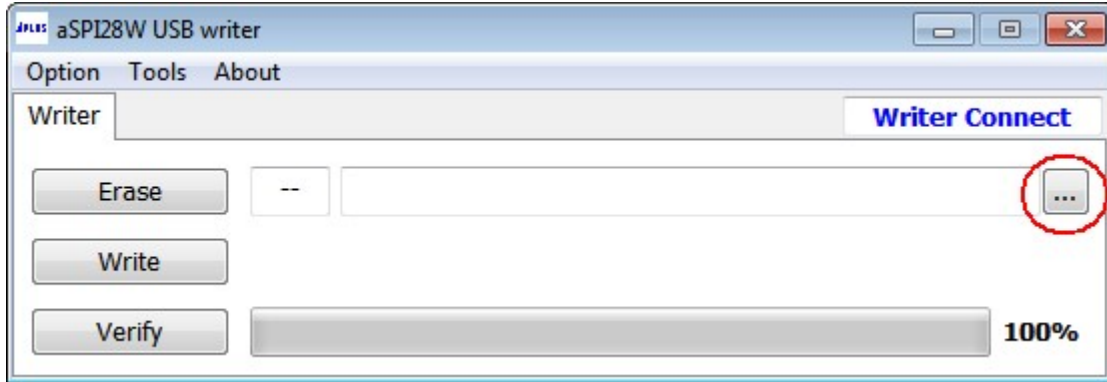
2. Double click aSPI28W icon to open software.



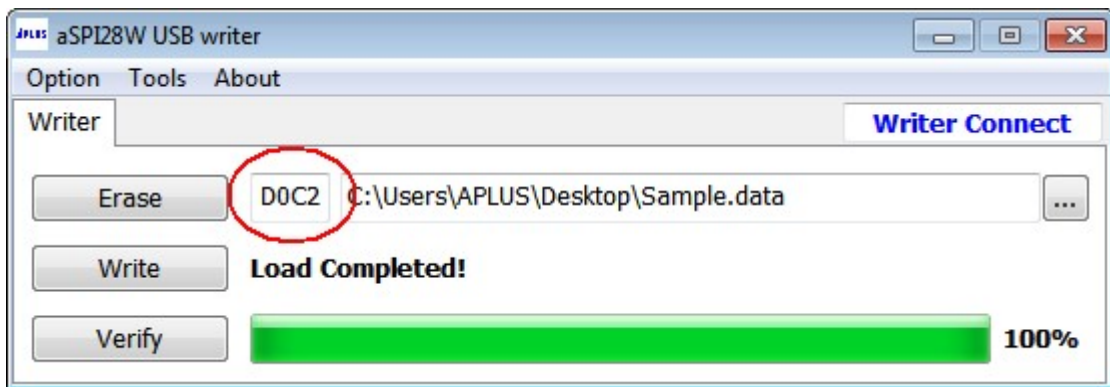
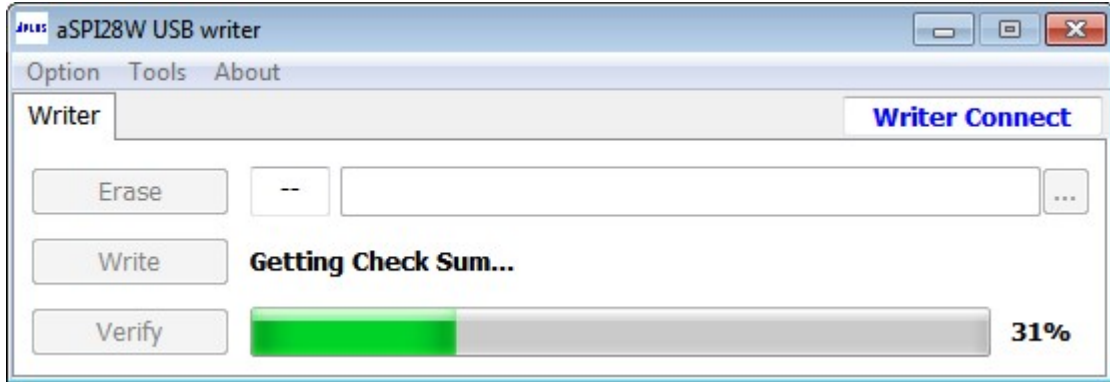
3. Check writer already connected.



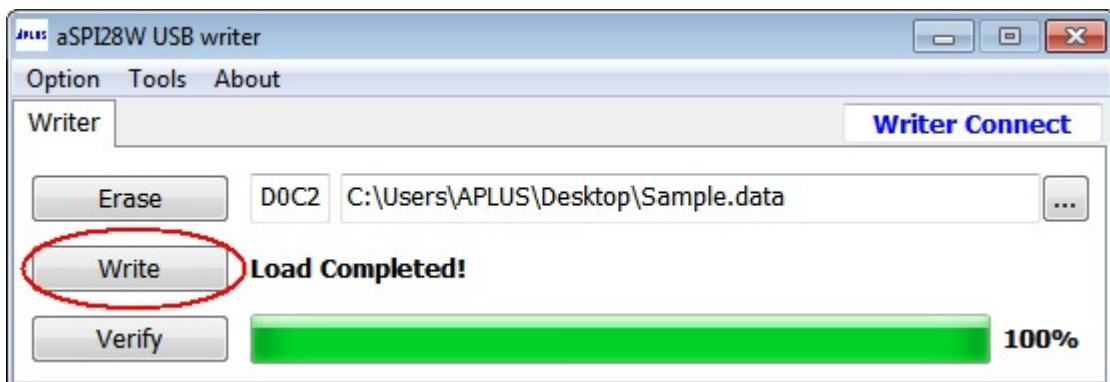
4. Click [...] to load a aMTPxxMK program file (*.data).



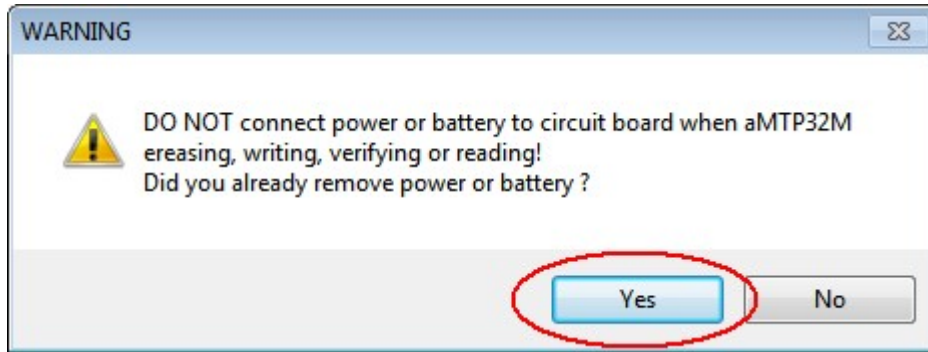
5. Software will get programmed file check sum, then show on the file path left.



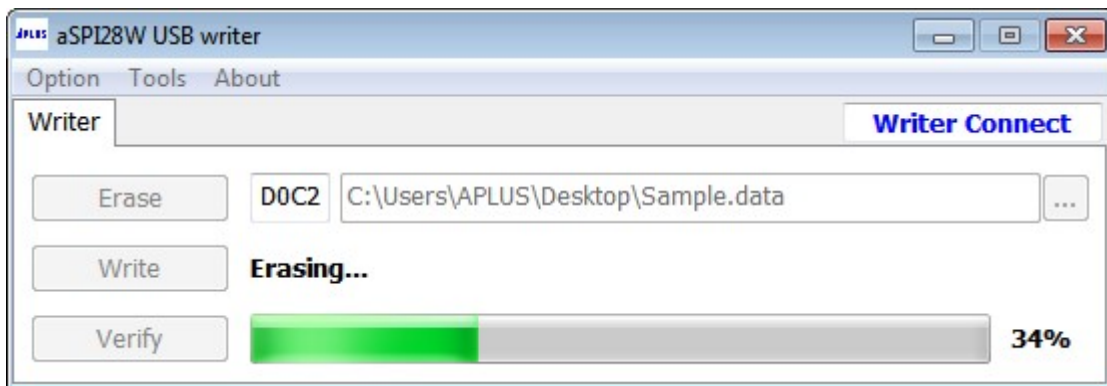
6. Click [Write] to program the file to aMTPxxMK chip.



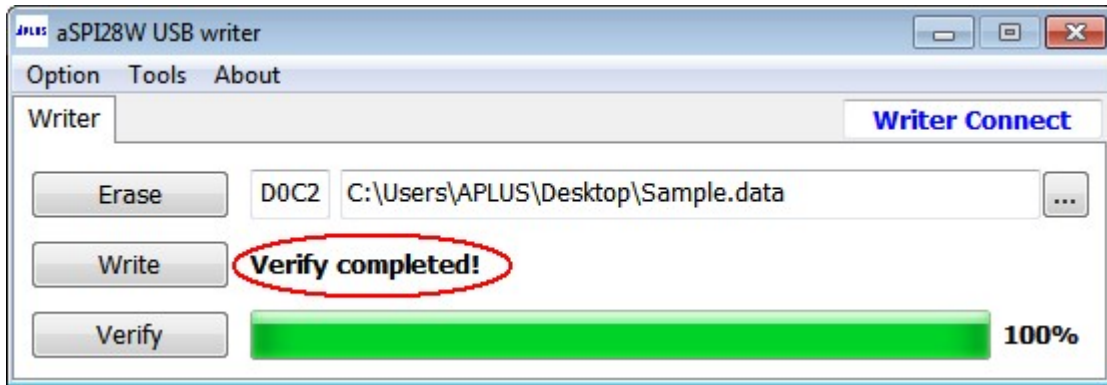
7. Check power or battery already removed, then click [Yes] .



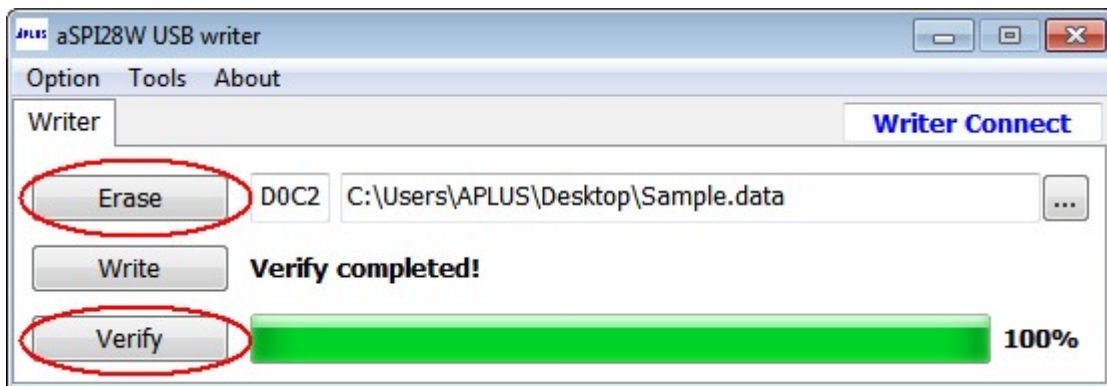
8. Software will start to erase, program and verify automatically.



9. When write successfully , software will show “Verify completed”.



10. You can do erase or verify only by [Erase] or [Verify] .



11. Now, you can remove aSPI28W USB writer, connecting power and speaker to play. About how to use aMTPxxMK-DB, please refer [aMTPxxMK-DB user guide] .

■ HISTORY