# FN-T418 MP3 Player Sound Module

User's Manual

Version: V1.0
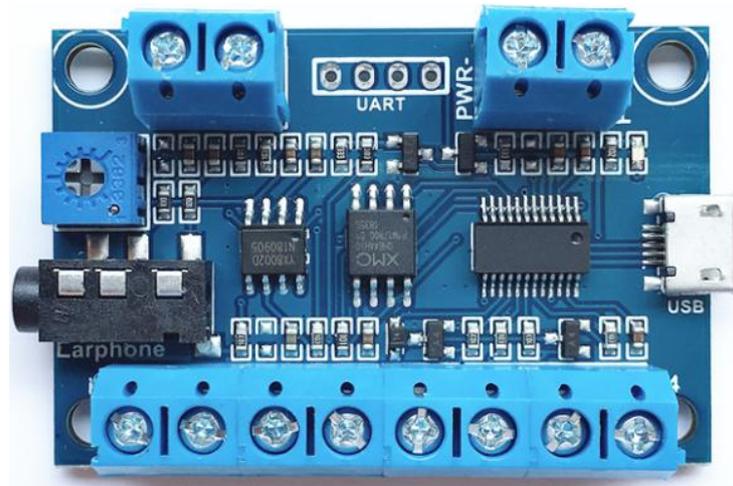
1. Features

✧   Supports earlier Windows, Windows 10, and Mac operating systems.

✧   Equipped with a high quality MP3 decoder chip.

✧   Built-in a 8MB flash memory, which is able to store total of about 8 minutes long MP3 files of 128Kbps.

✧   Update audio files easily through the micro USB port connected with PC like using a USB drive.

✧   4 button trigger inputs are available(K1-K4).

✧   Able to play four audio files one-on-one.

✧   Able to play multiple audio files on per button.

✧   Supports 7 triggering modes, and each mode can be set in a configuration file.

✧   Built-in a class D 3Watts amplifier IC and a 3.5mm audio jack for stereo output.

✧   Directly drives a 0.5Watts to 3Watts (4ohms to 8ohms) speaker.

✧   Volume is adjustable through adjusting the blue potentiometer.

✧   No power consumption when the module is not being used.

✧   Suitable to be powered with 3 x AA, 3 x AAA batteries or a Li-ion battery.

✧   Great sound quality and stable performance.

✧   PCB size: 50mmx34mm

✧   Height of the module: 14mm

www.flyrontech.com   E-mail: info@flyrontech.com

2. Technical parameters

✧   Working voltage: 3.7-5V DC

✧   Working current: ≤100mA(1Watt 8ohms speaker)

✧   Standby current: 0µA

✧   Flash memory size: 8Mbytes

✧   Audio format: MP3 or WAV

3. Connections
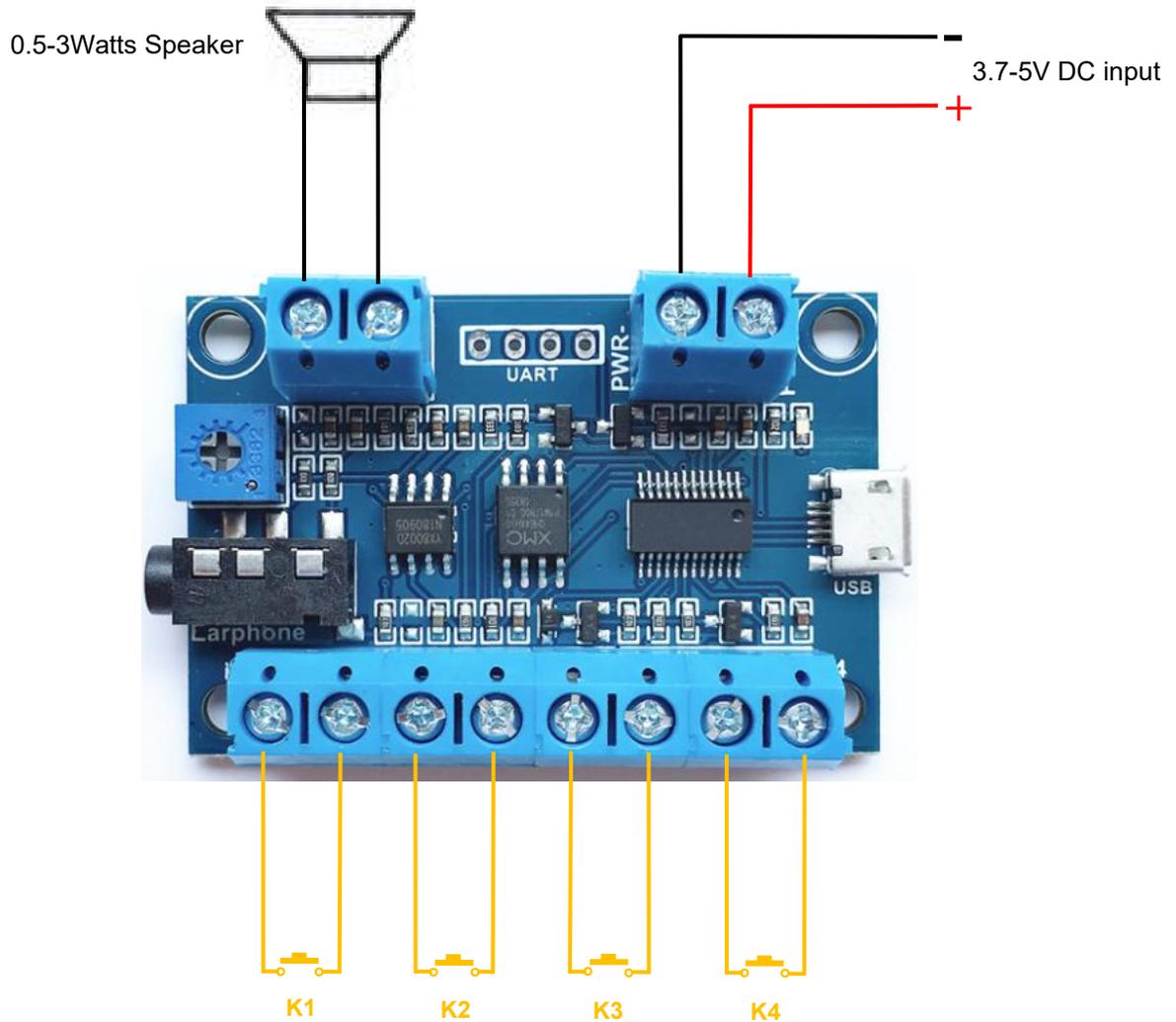
4. Operation Guide

4.1. Set Triggering Mode

There are 7 triggering modes available for users to set in a configuration file according to the actual needs.

Triggering Modes

Each of the mode number from "0" to "6" represents a corresponding triggering/work mode. See the details below.

Mode Number	Corresponding Triggering Mode
0	Pulse Interruptible
1	Level Hold Loop Playback
2	Pulse Non-interruptible
3	Pulse Loop Playback
4	Level Hold One-time Playback
5	Play Multiple Files Based on Pulse Interruptible
6	Play Multiple Files Based on Pulse Non-Interruptible

- Pulse Interruptible: In this mode, short press the button to start playback. It is possible to interrupt the playback by pressing the same button used to activate. Once playback is interrupted, it will automatically restart the audio file immediately. It's also possible to interrupt the playback by pressing any of the other 3 buttons. Once playback is interrupted, it will automatically start the sound that is associated with the button pressed.

- Level Hold Loop Playback: In this mode, a button must be held/maintained to the sound module trigger for audio file to complete. The audio file will only play back while button is held/maintained. During playback once the button being held is removed, the playback will be stopped/canceled. Once the button is kept holding, when the playback of the audio file is finished, it will start to play it repeatedly(loop playback).

- Pulse Non-interruptible: In this mode, short press the button to start playback. It's not possible to interrupt the playback by pressing the same button or the other buttons. Once an audio file is triggered, the audio file will not be able to be interrupted/canceled during playback. The playback will only end when the audio file has played its entirety.

- Pulse Loop Playback: In this mode, short press the button to start playback. When the playback of the audio file is finished, it will start to play it repeatedly(loop playback). During playback if the button is pressed again it will stop playback.

- Level Hold One-time Playback: In this mode, a button must be held/maintained to the sound module trigger for audio file to complete. The audio file will only play back while button is held/maintained. During playback once the button being held is removed, the playback will be stopped/canceled. Once the button is kept holding, when the playback of the audio file is finished, it will stop.

- Play Multiple Files Based on Pulse Interruptible: In this mode, short press the button to start playback from the first audio file in the associated folder. It is possible to interrupt the playback by pressing the same button used to activate and then it will play the next audio file in the same folder immediately. Once the playback of the last audio file in the folder is finished and the same button is short pressed again, it will

3

go back to play the first sound. It's also possible to interrupt the playback by pressing any of the other 3 buttons. Once playback is interrupted, it will automatically start the sound in the folder that is associated with the button pressed.

- <u>Play Multiple Files Based on Pulse Non-Interruptible</u>: In this mode, short press the button to start playback from the first audio file in the associated folder. It's not possible to interrupt the playback by pressing the same button or the other buttons. Once an audio file is triggered, the audio file will not be able to be interrupted/canceled during playback. The playback will only end when the audio file has played its entirety. Once the playback of the last audio file in the folder is finished and the same button is short pressed again, it will go back to play the first sound in the same folder.

Notes: 1). Triggering modes 0, 1, 2, 3, and 4 support one-on-one control only from connected four buttons , and the associated four audio files (001.mp3-004.mp3) need to be placed in the root directory of the memory when using one of these modes.

2). Triggering modes 5 and 6 support playing multiple audio files on per button. Each button (K1-K4) associates with a folder (01-04). Multiple audio files need to be placed in each associated folder when using either of these two modes.

3). After a sound finishes playing, there are 30 seconds waiting time when using mode 5 or 6. During the waiting time, if the same button is pressed again, it will play next sound in the associated folder. Once the waiting time ends, if the same button is pressed again, it will start to play the first sound instead of next sound.

Any of these 7 triggering modes can be set through a configuration file named "read.cfg", which comes from a text file(.txt) originally. Please refer to the two steps below on how to build a configuration file successfully. Let's take the triggering mode "level hold loop playback" as an example.

1). Build a new text file on computer and enter the corresponding number "1" that represents the triggering mode "level hold loop playback". Please refer to the image below.

2). Save it and change the file name "xxx.txt" to "read.cfg". Please make sure your computer shows filename extensions. The extension ".txt" must be changed to ".cfg'', otherwise the file is not workable. Please refer to the image below.

read.cfg
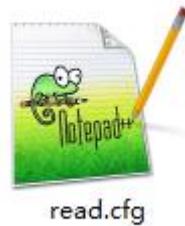
Note: If you use the triggering mode 0 (Pulse Interruptible), it's fine you don't need to place such a configuration file. We set it as the default triggering mode in the software.

4.2. Audio Files Loading

4.2.1. Files Loading Method for Triggering Mode 0-4

Four audio files need to be directly stored in the root directory of the flash memory. No folders can be in the 'root directory'. The arrangements of the audio files are managed by a physical index sequence. In other words, the file that is to be loaded first in the flash memory will be associated with input "K1". The last file to be loaded in the flash memory will be associated with input "K4". In order to guarantee a correct 'one-on-one' order, please refer to the following steps.

1). Build a new folder on the computer and put the 4 audio files in this new folder.

2). Rename the audio files from "001.mp3" to "004.mp3", and make sure they are ranked from "001.mp3" to "004.mp3" in order.

3). Connect the module with computer through an Android Phone purposed USB cable, and you will see a simulated USB drive or a removable disk on computer.

4). Double click the simulated USB drive or the removable disk, and delete the sample audio files pre-loaded at factory for testing purpose.

5). Go back to the folder and select all of the 4 audio files in the folder.

6). Right click on the first file (001.mp3) and choose "Send to USB drive" or "Send to removable disk".

7). This should send the 4 audio files to the memory in a correct sequence.

8). Put the prepared configuration file into the root directory together with audio files and then refresh. Refer to the image below.


9). Safely remove the module from computer.

10). Power up the module and push any of 4 buttons to play back a corresponding sound.

4.2.2. Files Loading Method for Triggering Mode 5 and 6

Multiple audio files need to be stored in each associated folder. Please refer to the following steps on how to load files for these two modes.

1). Connect the module with computer through an Android Phone purposed USB cable, and you will see a simulated USB drive or a removable disk on computer.

2). Double click the simulated USB drive or a removable disk, and delete the sample audio files pre-loaded at factory for testing purpose.

3). Build four new folders and rename them 01, 02, 03 and 04 respectively. Button K1 will be associated with folder 01, K2 will be associated with folder 02, K3 will be associated with folder 03, and K4 will be associated with folder 04.

4). Copy prepared multiple audio files into each folder. Audio files in each folder need to be renamed as "001.mp3", "002.mp3", "003.mp3", and so on.

5). Put the prepared configuration file into the root directory together with the folders and then refresh. Refer to the image below.
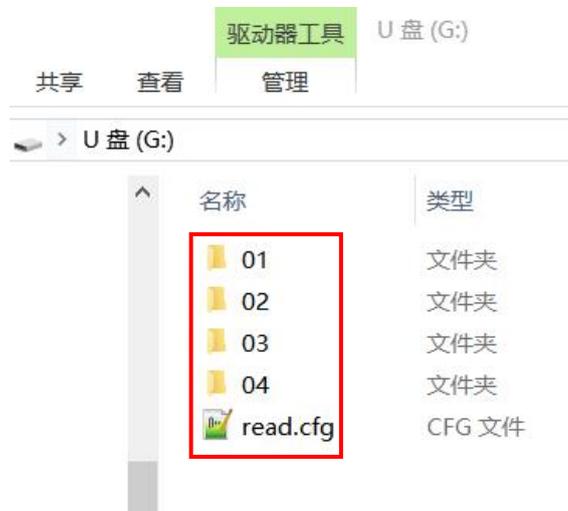
6). Safely remove the module from computer.

7). Power up the module and push any of 4 buttons to play back a sound in the associated folder.

6