30Watts Programmable MP3 Siren Horn with Triggers

User's Manual

Model No.: FN-A503

Version: V1.0

Release Date: Feb. 20th, 2025

1. Features

- ✧ 4 trigger inputs available and triggered by negative pulse (low-level) signal / ground.
  -Yellow wire: 1st trigger (K1), green wire: 2nd trigger (K2), blue wire: 3rd trigger (K3), white wire: 4th trigger (K4)
- ✧ Built-in high quality MP3 player module with 30Watts class D amplifier.
- ✧ Built-in 4MB flash memory, which is able to store total of 4 minutes long MP3 files of 128Kbps.
- ✧ Supports using a micro SD card as the extended memory.
- ✧ Plug the included USB data cable into computer to upload sound files.
  -it'll be detected as a USB flash drive on computer. No need any program/software.
- ✧ Supports multiple functions/trigger modes.
- ✧ The function/trigger mode of each trigger input can be set individually through using a configuration file.
- ✧ Can be controlled with buttons, switches, relays, sensors, or equipment with alarm outputs (low-level signal).
- ✧ Adjustable sound volume through the small blue potentiometer on the internal circuit board.
  -also possible to set any two trigger inputs to work as Vol+ and Vol- via the configuration file.
- ✧ Wide power input (12-24V DC) and stable performance.
- ✧ Industrial grade design and strong anti-jamming capability.
- ✧ Trigger wire length: about 50cm
- ✧ USB cable length: about 74cm

2. Technical Parameters

- ✧ Working voltage: 12V-24V DC
- ✧ Working current: ≥2000mA (Input: DC12V)
- ✧ Standby Current: ≤10mA
- ✧ Power Consumption: ≤30W
- ✧ Flash memory size: 4MBytes
- ✧ Audio format: MP3

3. Size

4. Operation Guide

4.1. Set Trigger Mode

There are 7 main trigger modes(from “0” to “6”) and 4 assistant trigger modes(from “7” to “A”) available for users to set in a configuration file according to the actual needs

Each of the parameters from “0” to “A” represents a corresponding trigger mode/function, which an be set individually for each of the 4 trigger inputs. See the details below.

Parameter	Corresponding Trigger Mode
0	Pulse interruptible
1	Hold for playback in a loop
2	Pulse non-interruptible
3	Pulse non-interruptible and hold for playback in a loop
4	Hold for playback once
5	Single in a loop
6	All in a loop
7	Previous
8	Next
9	Vol+
A	Vol-

Detailed Explanations about the Main Trigger Modes 0-6

Pulse interruptible: In this mode, a single negative pulse will 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 play back 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.

Hold for playback in a loop: In this mode, the negative pulse must be held/maintained to the sound module trigger for audio file to complete. The audio file will only playback while button, or negative pulse, is held/maintained during playback. Once the button being held, or negative pulse, 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, a single negative pulse will 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 non-interruptible and hold for playback in a loop: In this mode, a single negative pulse will 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. If there is a continuous pulse signal or the button is held/maintained before the audio file plays its entirety, it'll play the audio file again.

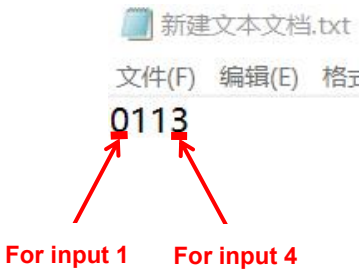
Hold for play once: In this mode, the negative pulse must be held/maintained to the sound module trigger for audio file to complete. The audio file will only playback while button, or negative pulse, is held/maintained during playback. Once the button being held, or negative pulse, is removed, the playback will be stopped/canceled. Once the button is kept holding, when the playback of the audio file is finished, it will not start to play it again.

Single in a loop: In this mode, a single negative pulse will start playback. Press the button and it's able to play the associated audio file in loop. During playback, if the the same button is pressed again, the playback will be stopped.

All in a loop: In this mode, a single negative pulse will start playback. Press the button and it's able to play all the audio files in the storage device one by one in loop. During playback, if the the same button is pressed again, the playback will be stopped. In addition, if the associated trigger input is shortened with GND first, the player will automatically play the audio files one by one in loop once it is powered on.

Any of these 11 trigger modes can be set for any of the 4 trigger inputs through a configuration file (text file). In the configuration file, each digit that represents the trigger mode is associated with one trigger input, so there are total of 4 digits that associate 4 trigger inputs respectively. Please refer to the two steps below on how to create a configuration file successfully.

1). Create a new text file on computer and enter the corresponding number like "0113" that represents the 1st trigger will be set with the trigger mode "pulse interruptible", the 2nd and the 3rd triggers will be set with the trigger mode "hold for playback in a loop", the 4th trigger will be set with the trigger mode "pulse non-interruptible and hold for playback in a loop". Refer to the image below.



2). Save it and change the file name to "read" or "config". See as below.

4.2. Audio Files Uploading

See the image below. There is a USB data cable included with the device, and users can plug it into computer to upload audio files and configuration file. The built-in flash memory will be detected as a USB flash drive on computer. .

If you want to use a micro SD card instead, you need to remove the back cover first and find the internal sound module as shown below. There is a micro SD slot on the module.

When there is a micro SD card inserted onto the internal module, the micro SD card will replace the built-in flash and will be directly detected as a USB flash drive on computer through plugging into the USB data cable. The device supports max. 32GB micro SD card, so please use a micro SD card within 32GB capacity. Format in FAT32 for the micro SD card is preferable.

As you can see, there is a blue volume potentiometer on the internal module. We already adjusted the output volume to approx. 85% at our factory by default, so basically it can meet most users' needs. If you expect to get a bigger sound output, you can turn the potentiometer clockwise, but we don't recommend to turn it up to the maximum in order to protect the horn for durability.

If you just need 1 or 2 triggers, you can have 2 of the other triggers to work as Vol+ and Vol- through setting in the configuration file to achieve using external buttons to control volume. Button controlled output volume is also under control of the poteniometer.

Steps to Upload Audio Files

4 audio files need to be directly stored in the root directory of the built-in flash memory/micro SD card. No folders can be in the root directory. The arrangements of the audio files are managed by physical index order. In other words, the file that is to be uploaded first in the storage device will be associated with the 1st trigger. The last file to be uploaded in the storage device will be associated with the 4th trigger. In order to guarantee a correct 'one-to-one' order, please refer to the following steps.

1). Create a new folder on computer and put the 4 audio files into this new folder.

2). Rename the audio files to 001, 002, 003 and 004 respectively, and make sure they are ranked from 001 to 004 in order.

3). Plug the USB data cable into computer, and you will see a removable disk / USB flash drive.

4). Delete the sample audio files preloaded at factory for testing purpose.

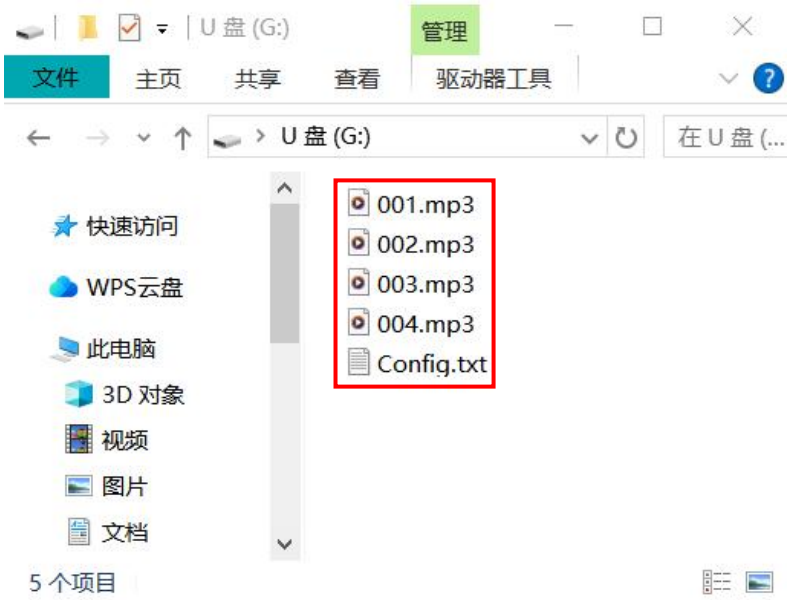
5). Back to the folder and select all of the 4 audio files in the folder.

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

7). In this way it will send the 4 audio files to the memory in a correct order.

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 USB data cable from computer.

10). Apply power to the device and push any of the 4 buttons to play back a corresponding sound.

Notes:

1). If there is no configuration file in the flash memory/micro SD card, the device will always work in the trigger mode "0" for all the inputs by default.

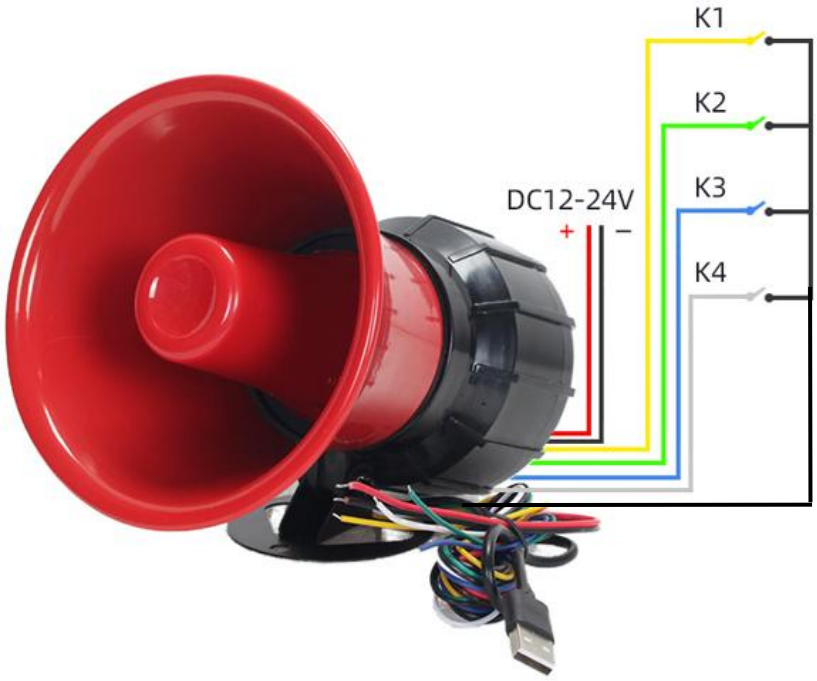
2). If the total of 4 audio files is less than 4Mbytes, it's fine to directly use the built-in flash memory. If they are larger than 4Mbytes, please use a micro card instead. When you use a micro SD card, please also put the configuration file in the

micro SD card as well.

3). Any of the 4 assistant trigger modes (from "7" to "A") can be set for any of the 4 trigger inputs as well.

4). Regarding to the trigger modes 6, 7 and 8, it's not limited to 4 audio files only.

4.3. Example of Wiring Connection



Note: there is an additional black wire (GND) working as COM. It's also possible to directly trigger the horn through a PLC/industrial controller that gives low signal. When it works with a PLC/industrial controller, ground needs to be shared in advance.