



FN-W101 Triggerable MP3 Audio Player/Wall Speaker

User's Manual

Version: V1.1





1. Features

- ✧ Equipped with a high quality MP3 player with great sound quality.
- ✧ Built-in a 4MB flash memory by default, which is able to store total of 4 minutes long MP3 files of 128Kbps.
- ✧ Supports max. 32GB flash memory(the size of flash memory can be customized).
- ✧ Update MP3/WAV files to the flash memory easily through the micro USB port based on PC like using a USB flash
- ✧ Play the sound messages by negative triggering.
- ✧ 4 different trigger modes available.
- ✧ Can be controlled by buttons, switches or relays.
- ✧ Built-in a class D amplifier for a great sound output.
- ✧ Adjustable sound volume.
- ✧ Wide power input(DC9-24V) and stable performance.
- ✧ Dimensions: 120x120x60(mm)

2. Electrical parameters

- ✧ Working voltage: DC 9V-24V
- ✧ Working current: ≤400mA (Input: DC12V)
- ✧ Power Consumption: ≤5W
- ✧ Flash memory size: 4MB(possible to be extended)
- ✧ Audio format: MP3/WAV

3. Operation Guide

3.1. Set Trigger Mode and Volume

There are 4 trigger modes and 31 volume levels available for users to set in a configuration file according to the actual needs.

Trigger Modes

Each of the parameters from “0” to “3” represents a corresponding trigger mode. See the details below.

Parameter	Corresponding Trigger Mode
0	Pulse interruptible one-on-one playback
1	Level hold loop playback
2	Pulse non-interruptible one-on-one playback
3	Standard MP3 key mode playback

- Pulse interruptible one-on-one playback: 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 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, 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/cancelled. Once the button is kept holding, when the playback of the audio file is finished, it will start to play it repeatedly(loop playback).

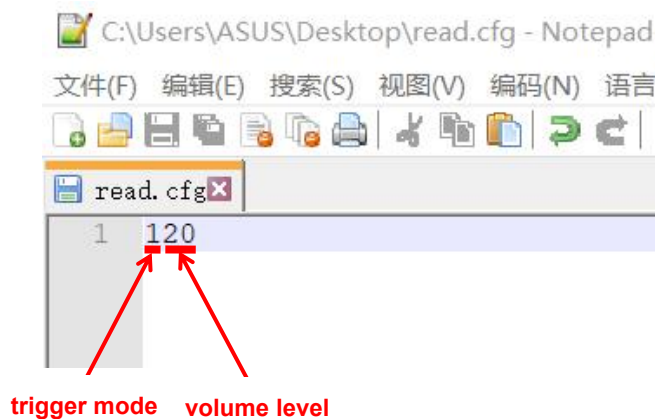
- Pulse non-interruptible one-on-one playback: In this mode, a single negative pulse will start playback. It's not possible to interrupt the playback by pressing the same button or the other buttons. Once an audio file is triggered, the audio file will not be able to be interrupted/cancelled during playback. The playback will only end when the audio file has played its entirety.
- Standard MP3 key mode playback: In this mode, the buttons between K1 and K4 will be functioned as Previous, Next, Play/pause, and Stop respectively. In this case not like the other 3 trigger modes above, more than 4 audio files can be placed.

Volume Levels

Each of the parameters "00" to "30" represents a volume level. "00" represents mute while "30" represents the max. Volume level.

Any of these 4 trigger modes and 31 volume levels 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 trigger mode "level hold loop playback" and volume level "20" as an example.

1). Build a new text file on computer and enter the corresponding number "120" that represents the trigger mode "level hold loop playback" and volume level "20". Refer to the image below.

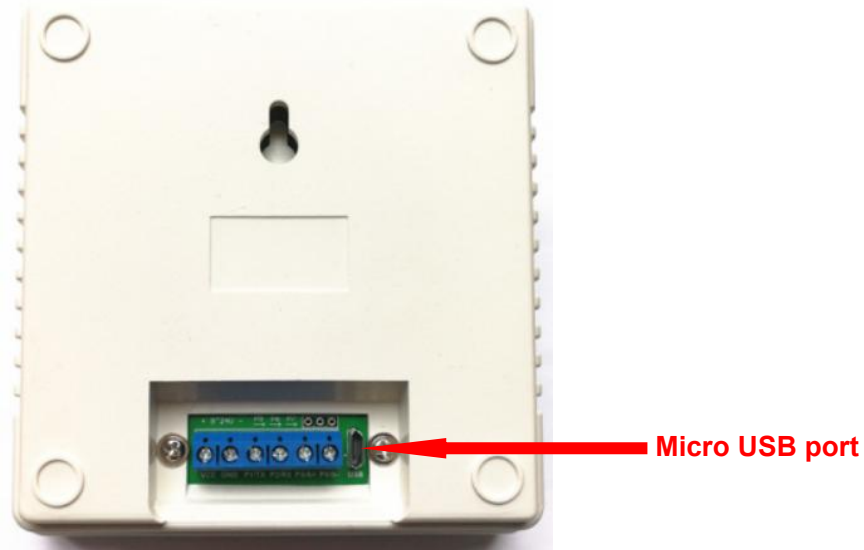


2). Save it and change the file name "xxx.txt" to "read.cfg". Please make sure your computer shows filename extensions. The extension ".txt" must be changed to ".cfg", otherwise the file is not workable. Refer to the image below.



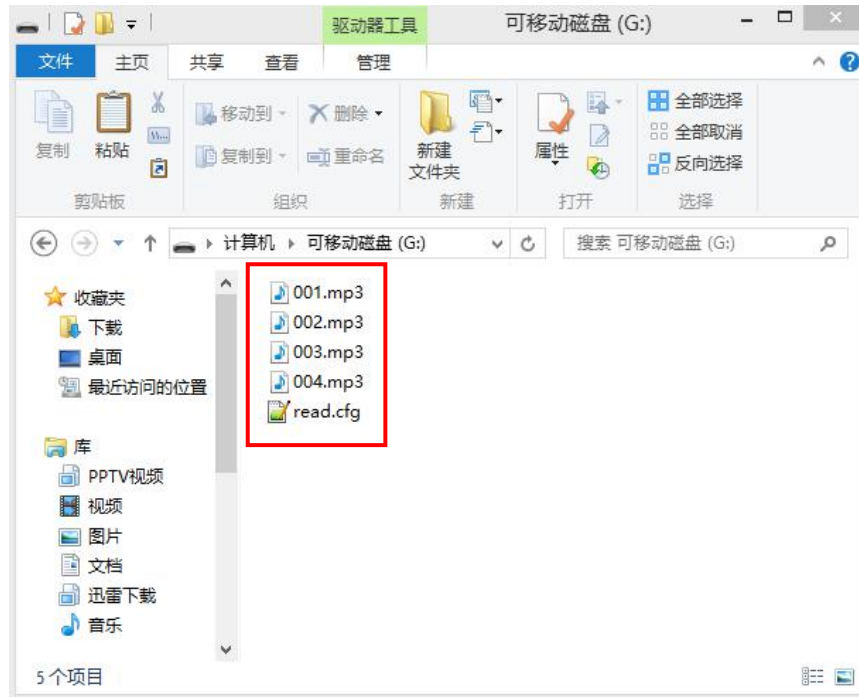
3.2. Audio Files Loading

See the image below. There is a micro USB socket at the back of the device. Users can connect it to computer through an Android phone purposed USB cable to load audio files and configuration file.



4 audio files need to be directly stored in the root directory of the memory/storage device. No folders can be in the 'root directory'. The arrangements of the audio files are managed by a physical indexing sequence. In other words, the file that is to be loaded first in the storage device will be associated with input "K1". The last file to be loaded in the storage device 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/wav to "004.mp3/wav", and make sure they are ranked from "001.mp3/wav" to "004.mp3/wav" in order.
- 3). Connect the equipment with computer through the USB cable, and you will see a removable disk.
- 4). Delete the sample audio files pre-loaded at factory for testing purpose.
- 5). Select all of the 4 audio files in the folder.
- 6). Right click on the first file (001.mp3/wav) and choose "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.

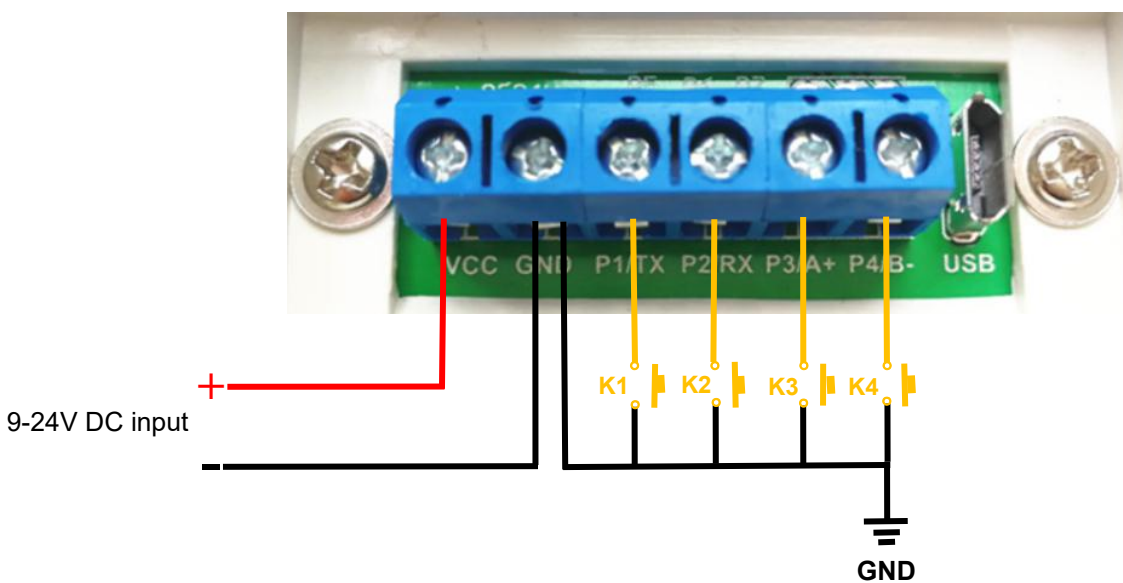


- 9). Safely remove the USB cable from computer.
- 10). Apply power to the equipment and push any of 4 buttons to play back a corresponding sound.

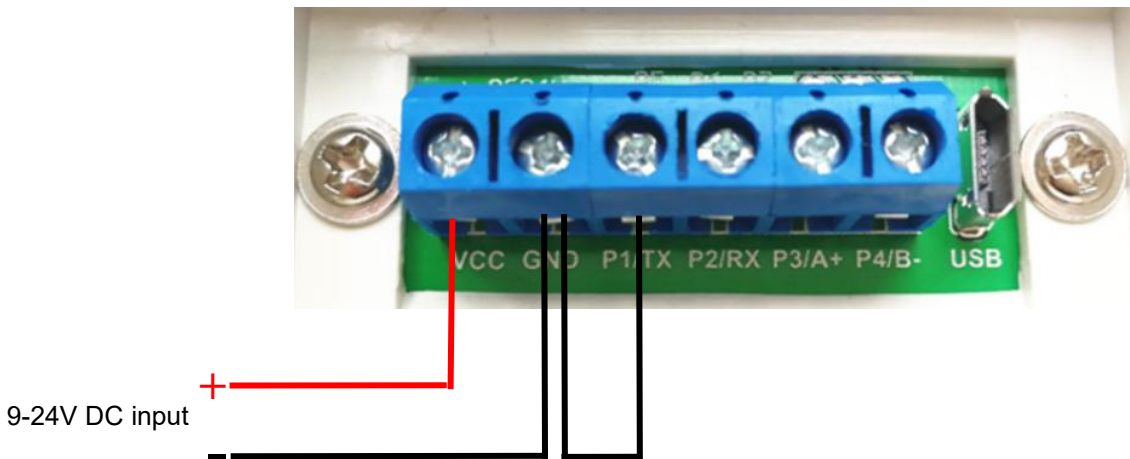
Notes: If the trigger mode of pulse interruptible one-on-one playback and the max volume is needed, it's also workable if you don't put the configuration file. The player takes this trigger mode and the max volume as the default if without a configuration file.

3.3. Examples of Wiring Connection

3.3.1. Reference for Normal Use



3.3.2. Reference for Automatic Playback When Powered Up



This wiring method is for those customers' reference, who need the player to play the sound messages automatically in a loop once it's powered up. Besides, to achieve this function the trigger mode in the configuration file must be "3".

4. Relation table between flash capacity and time duration supported based on different bit rates of MP3 files

Time unit: second

Capacity Bit rate	4Mbytes	8Mbytes
	16Kbps	2022
24Kbps	1309	2618
32Kbps	906	1812
64Kbps	477	955
96Kbps	325	651
128Kbps	246	493
160Kbps	194	389
192Kbps	161	323
256Kbps	120	241
320Kbps	95	191