10-Ch MP3 Audio Playback Controller

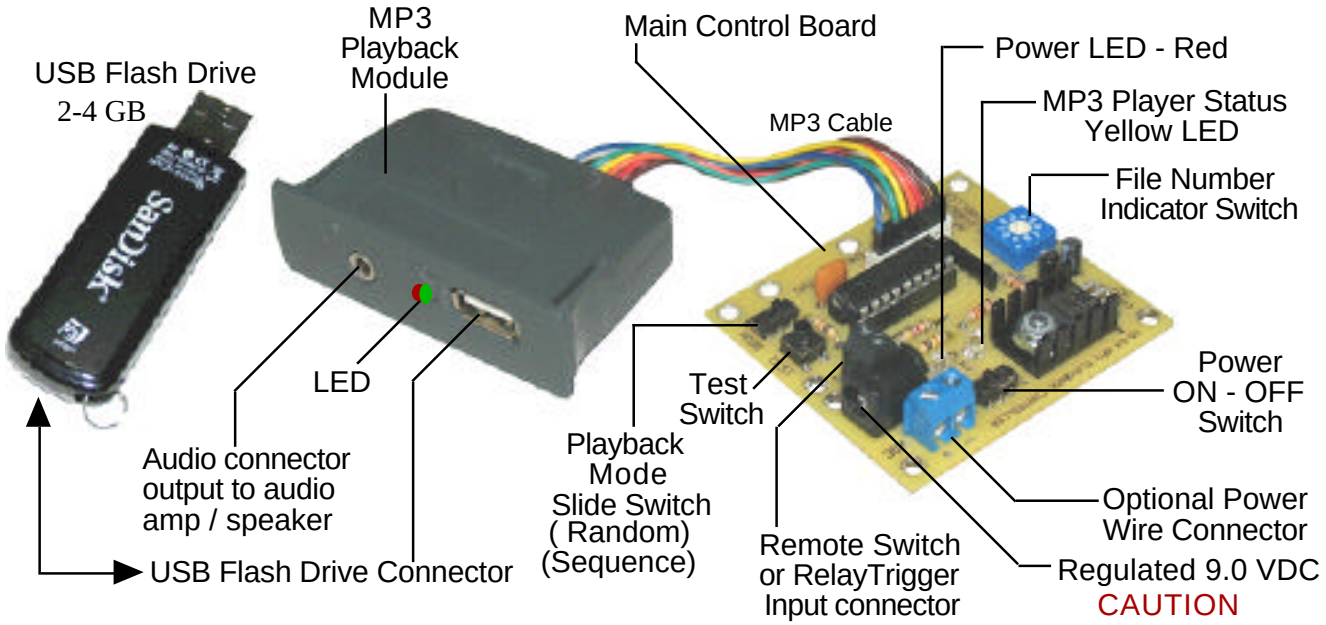
Version 3.1
04/12

Description: This board is designed to control the sequence or random playback by remote user switch or relay contact of 1 to 10 channels of MP3 audio files that have been recorded and stored on a USB flash device, connected to the MP3 control board with audio sent out to an attached external remote audio amp / speaker

Set-up: To use this board, you must first store1 to10 MP3 files on a USB flash drive. These files must be named as follows: The first file must be named "**file000.mp3**". The next file must be named "**file001.mp3**" and so on to the last file "**file009.mp3**". You can have as many files as you want up to 10. If you had 10 files, the last file would be named "**file009.mp3**", (Remember you started at file000.mp3). When naming the files, do not skip any numbers. The MP3 files can be of any audio length up to the storage capacity of the USB flash drive.

Once you have recorded your files, you must set the **Audio File Number** Indicator Switch located on the control board (see setup drawing) to indicate to the on board micro processor how many files you have stored on the USB drive. For example, if you only have 5 MP3 audio files on the drive, they would be named "**file000.mp3**" to " **file004.mp3**" and you would set the File Number Indicator to **position 4** (0, 1, 2, 3, 4 = 5 files, Remember you started at file000.mp3). Connect a stereo cable to the audio output jack on the MP3 Module and other end to a powered amplifier / speaker for sound (see setup drawing). Connect a regulated **9Vdc** power supply from 800mA to 1 Amp to the power jack or to the power wire terminal block. (**CAUTION**: Make sure the power supply used is a **DC** type, **DO NOT USE 9 VAC** Power Supply) Attach a remote momentary push button switch or dry closure contacts (Relay Outputs) to the Remote Trigger Wire Terminal block connector. Slide the onboard Mode Switch to Random or Sequence Playback. **NOTE**: If Audio Playback board is Extreamly Hot and Stops working after a few minutes. Check the power supply and use a REGULATED power supply of 9 Vdc at 500 mAmps

Operation:
Insert the USB drive with recorded audio files into the USB connector on the MP3 Module and turn on the power switch. The **RED** LED on the main control board will come on indicating that power is on. You will also see a flashing red and green status LED on the MP3 module next to the USB drive. This indicates the flash drive module is initializing. When it glows a solid green, then the control board is ready to use. Each time the Remote Switch, remote connected relay or on board test button is activated it will trigger the player to cycle through the MP3 files sequentially or random (mode switch setting), playing back the stored audio. The controller will wait until the sound file has finished playing before it can be activated again. A **Yellow** LED will indicate that a sound file is playing.



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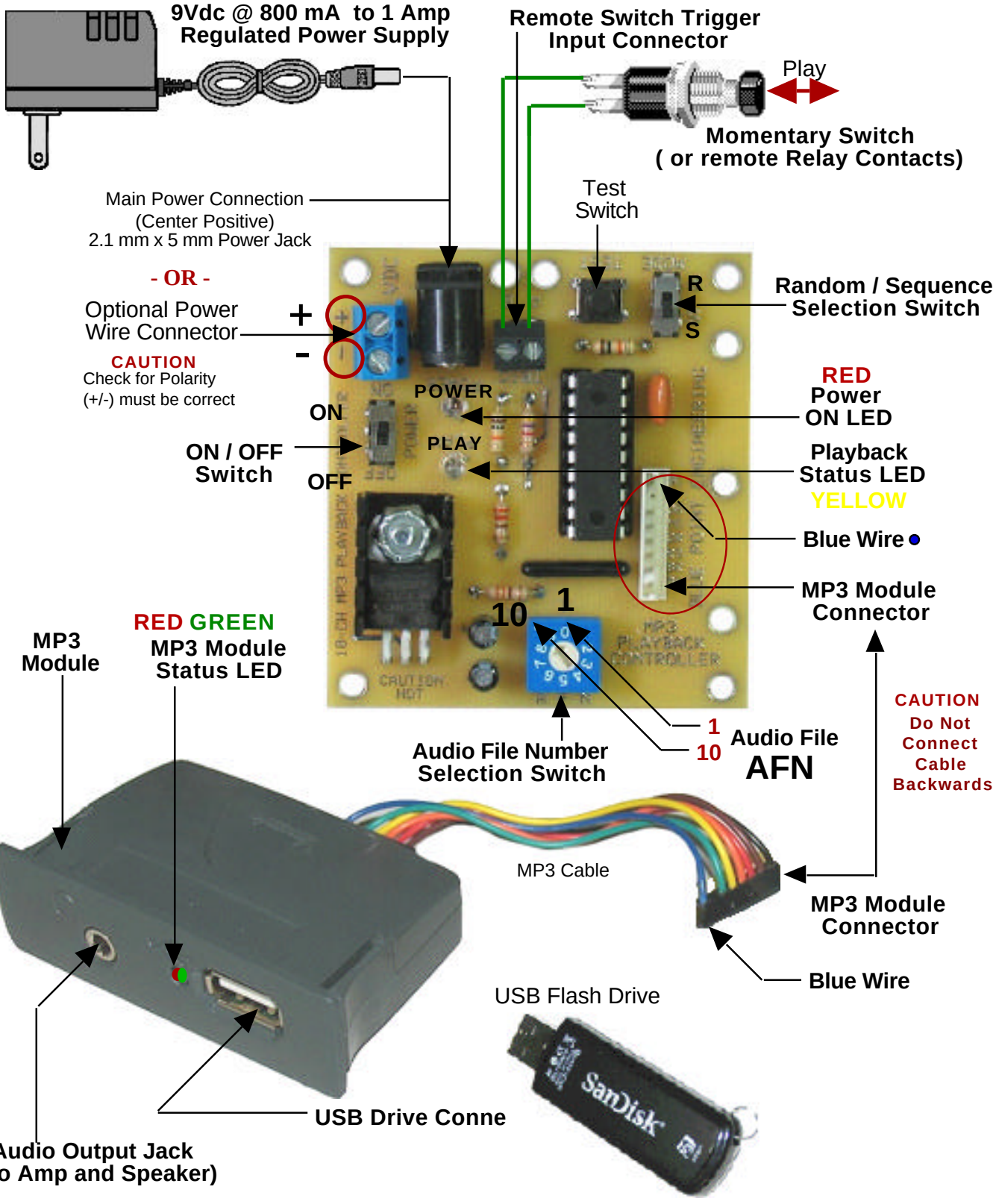
Main Control Board Setup

Overview



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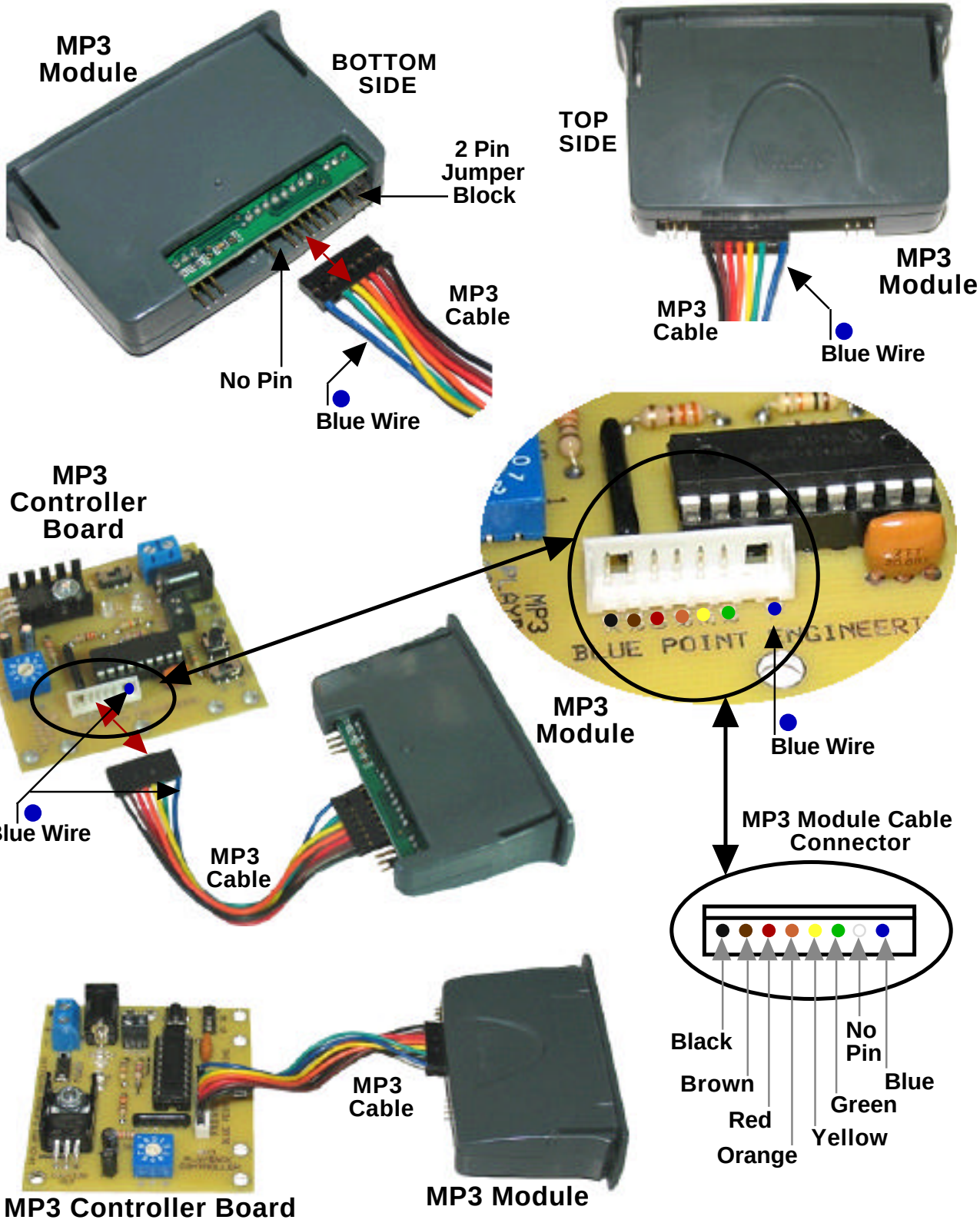
MP3 Module Setup

Overview



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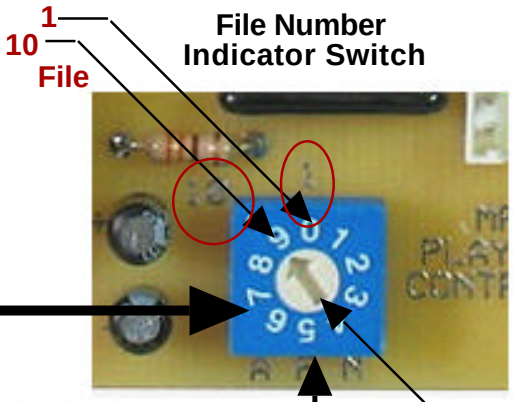
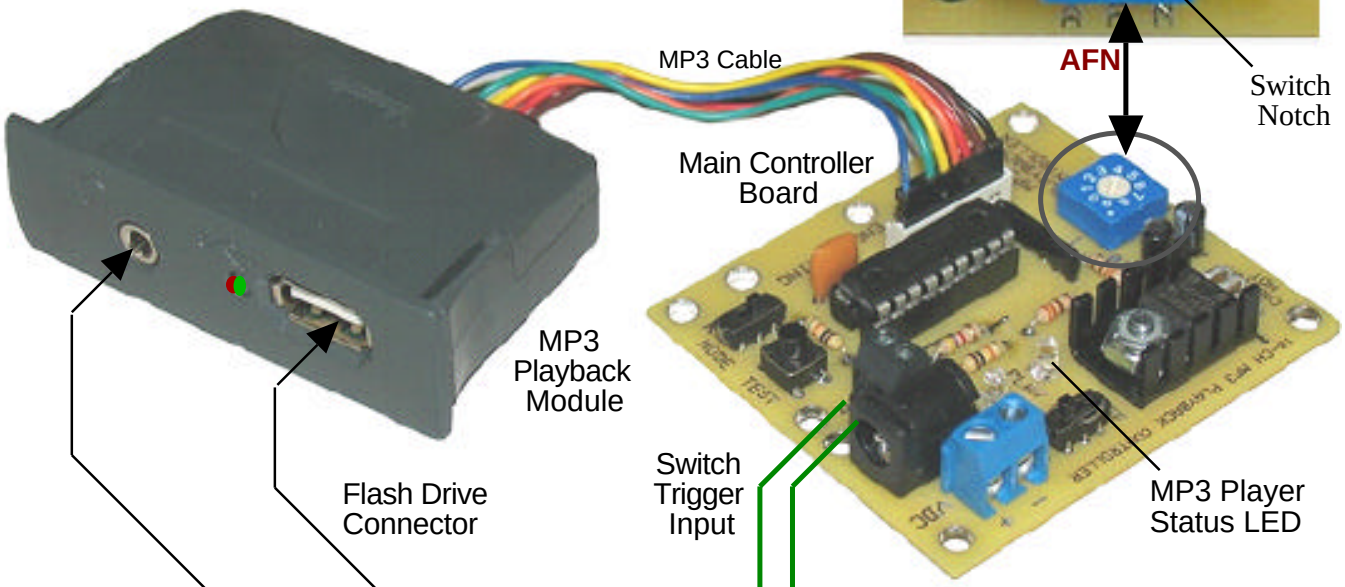
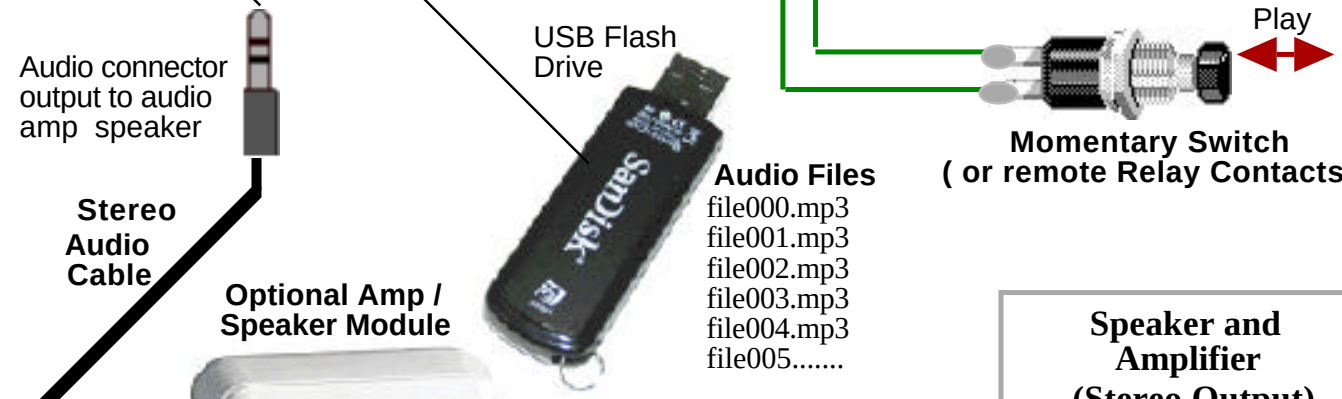
File Number Indicator Switch

You must set the **Audio File Number** Indicator Switch located on the Main Control Board to how many files you have stored on the USB Flash drive. For example, if you only have 5 MP3 files on the drive, they would be: "**file000.mp3**" ,"**file001.mp3**" ,"**file002.mp3**", " **file003.mp3**","**file004.mp3**" and you would set the Audio File Number Indicator switch to **position 4** (0, 1, 2, 3, 4 = 5 files, Remember you started at **file000.mp3 (Position 9 = 10 Files**) (Make sure Switch Notch is at correct number)

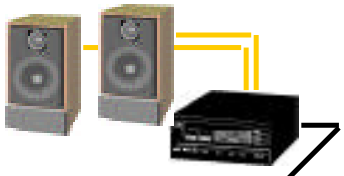






Audio Files
file000.mp3
file001.mp3
file002.mp3
file003.mp3
file004.mp3
file005.....

Speaker and Amplifier (Stereo Output)



Stereo Sound System

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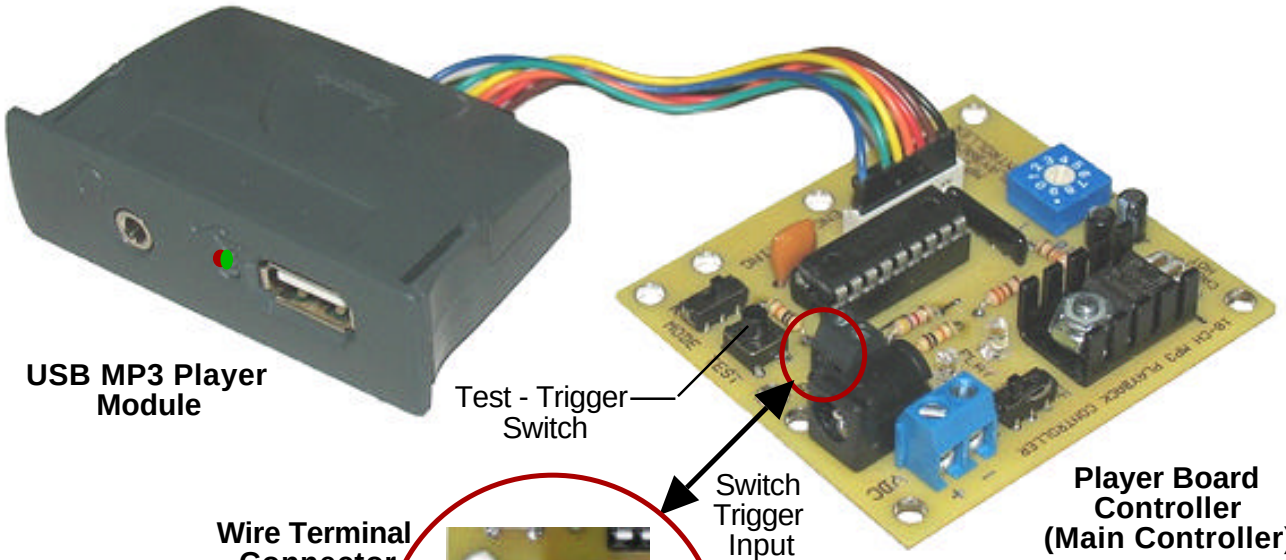
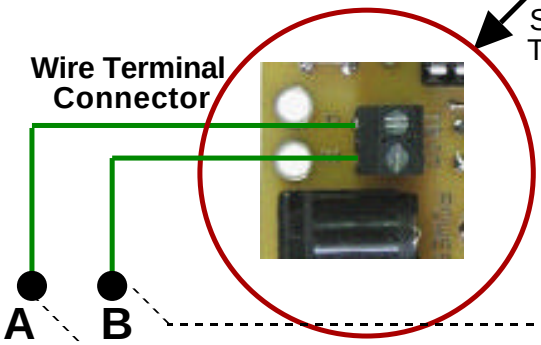
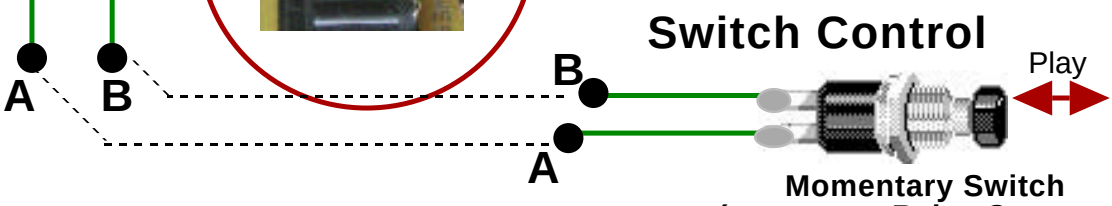
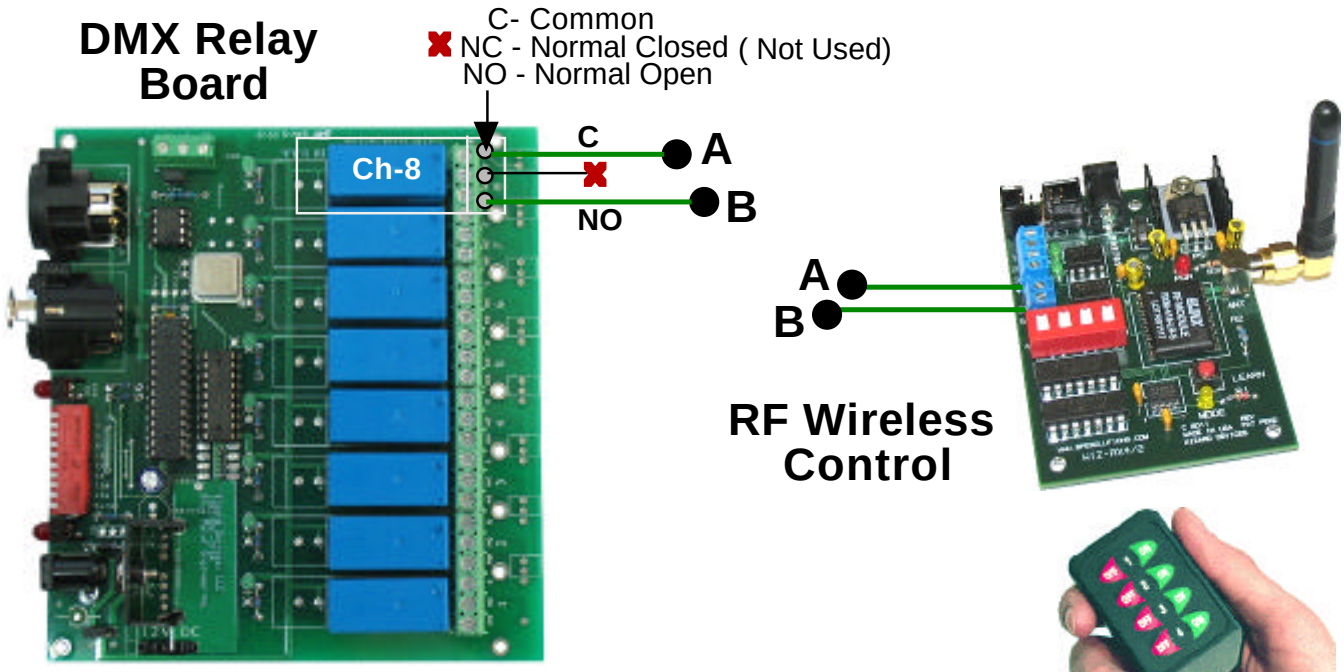
Board Trigger Control Setup

Overview









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Playback Mode Selection:
Set the onboard Mode Switch to Random or Sequence Playback.
Sequence Mode: Audio files are played starting at file1 (file000.mp3) and move to the next numbered file each time the remote trigger switch is activated or if connected to a remote relay contact each time the relay is activated. When the last highest numbered file is reached in the play list, (10) (Max file = file009.mp3) then the next audio file triggered will restart at audio file1 (file000.mp3), The controller will wait until the sound file has finished playing before it can be activated again. (Yellow LED will turn ON / OFF as file is played)
Random Mode: Audio files are played randomly, each time the remote trigger switch is activated or if connected to a remote relay contact each time the relay is activated. The controller will wait until the sound file has finished playing before it can be activated again. (Yellow LED will turn ON / OFF as file is played)
NOTE: any number of file can be recorded from 1 to 10 audio files. The length of the recorded audio files available is determined by the size of the USB Flash Memory Drive. (2-4 GB size recommended)
Min number=1 file (file000.mp3) and the Max number=10 file (file009.mp3)
Audio File Size= As large as the USB Flash memory Drive capacity is.

Troubleshooting / Hints Guide

Q. I have recorded my sounds, but nothing plays back when I activate the trigger switch or test button.
A. Check to see that you have named the audio files correctly. For example, if you only have 5-MP3 audio files on the drive, they would be named "**file000.mp3**" to "**file004.mp3**"
A. Check to see if your Hide File Extension display is turned ON in your computer, if so, then the files probably have double extensions added,"**file000.mp3.mp3. -**" **file009.mp3.mp3. The second extension is incorrect, should be file000.mp3**" to "**file009.mp3,** Turn Hide OFF and rename the files.
A. Check to see that the main board File Number Indicator switch is set to the correct number of files you have on the USB Flash Memory Drive: Remember you started at file000.mp3 so the File Number Indicator would be set to the **position 4** (0, 1, 2, 3, 4 = 5 files). Make sure Notch on Switch is correct position.
A. Check to see that the audio files you are using are not a different format, The audio file must be MP3 type.
A. Check to see that the audio files have been transferred onto the USB Flash Memory Drive.
A. When you activate the remote switch test button, does the **Yellow** LED on the board go ON and then OFF. This would indicate that the audio file has been triggered for playback, but that the sound may not be getting to the remote connected Amplifier / Speaker module. Make sure that the power to the Amplifier and Speaker is ON and the volume turned up. Check the stereo audio cable connected between the MP3 sound playback board audio jack output and the Amplifier / Speaker Module audio input jack, making sure that it is plugged in and that the audio cable is good. If the **Yellow LED does not turn OFF or ON** when the remote switch or test button is activated, then there may be a problem with the USB Flash Memory Drive or the MP3 audio files, names or audio format-type is not MP3. Try a different USB Drive, Check Audio Files.
A. Check the power supply and make sure that you are connected to the controller board and plugged into the wall outlet if using a wall adapter. Make sure that you have the correct power supply (9 **VDC** power)
A. Make sure that the board power switch is ON (You should see a **RED LED** light when there is power to the sound controller board)
A. Check your USB Flash Memory Drive to see that it has been formatted as a blank drive, before adding you new sound files, Some USB Flash Memory Drives have a security or Auto Boot feature that prevents the MP3 player from using the sound files correctly even when formatted. Re-format your USB Flash Memory Drive removing any security or Auto Boot formats first. **(Format USB Flash Drive as a MS-DOS FAT)** Try a different USB Flash Memory Drive type, as some manufacture brands operate different than others.

Q. I would like all the audio files to play once, and then start over automatically.
A. Connect a jumper wire across the remote switch / relay trigger input connector. The audio files will play as looping playback. The controller will wait until the sound file has finished playing before it will playback the next audio file.

Q. I am using the optional Mini Audio Amp / Speaker module, but there is no sound from it.
A. Check to see that a 9v Battery has been installed, or if the battery is dead.

Q. No audio when I trigger the board. But the Yellow LED is ON.
A. Check to see that the sound file is named correctly. Check to see if there is some white noise (NO SOUND. but blank air time) before the actual sound or after the sound. (Use a sound editor software to check this)
A. Check the AFN to make sure it is set to the correct number of sound files you have on the USB drive.

Q. Audio Playback (Yellow LED ON) is not immediate and audio does not stop immediately after
A. sound has played,(Yellow LED ON). Check to see if there is some white noise (NO SOUND, but blank air time) before the actual sound or after the sound. (Use a sound editor software to remove this blank time).

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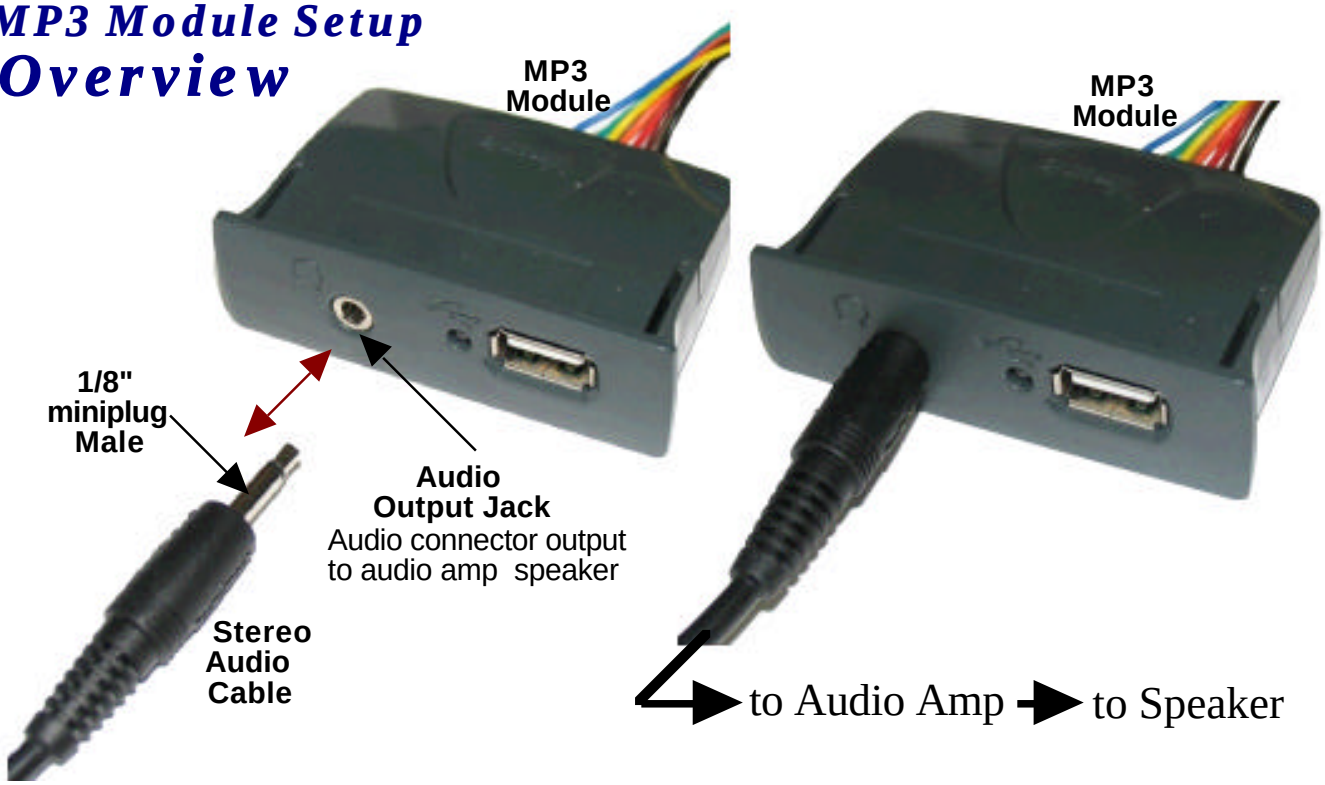
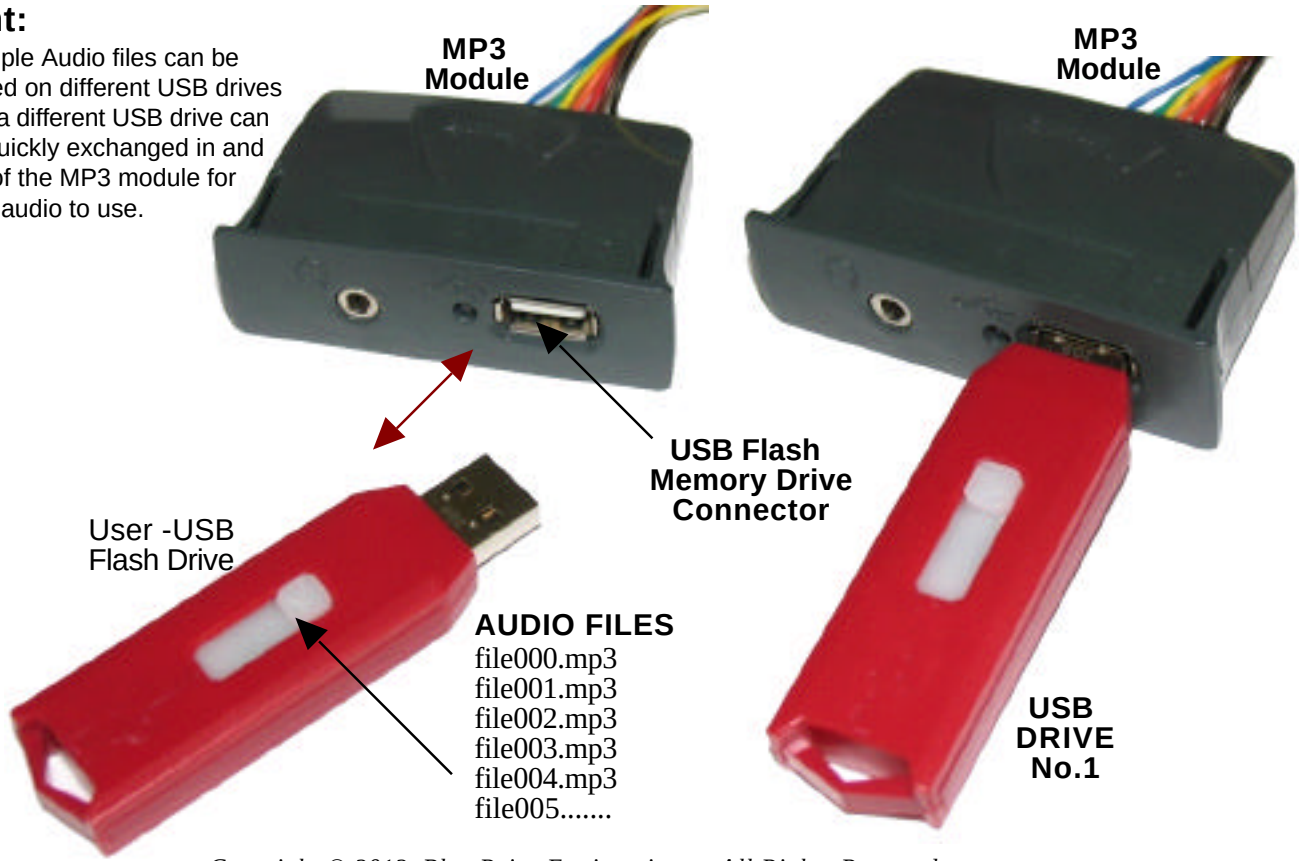
MP3 Module Setup
Overview



Hint:

Multiple Audio files can be stored on different USB drives and a different USB drive can be quickly exchanged in and out of the MP3 module for new audio to use.



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