12 Volt Timer with an MP3/WAV sound card

Sound Card

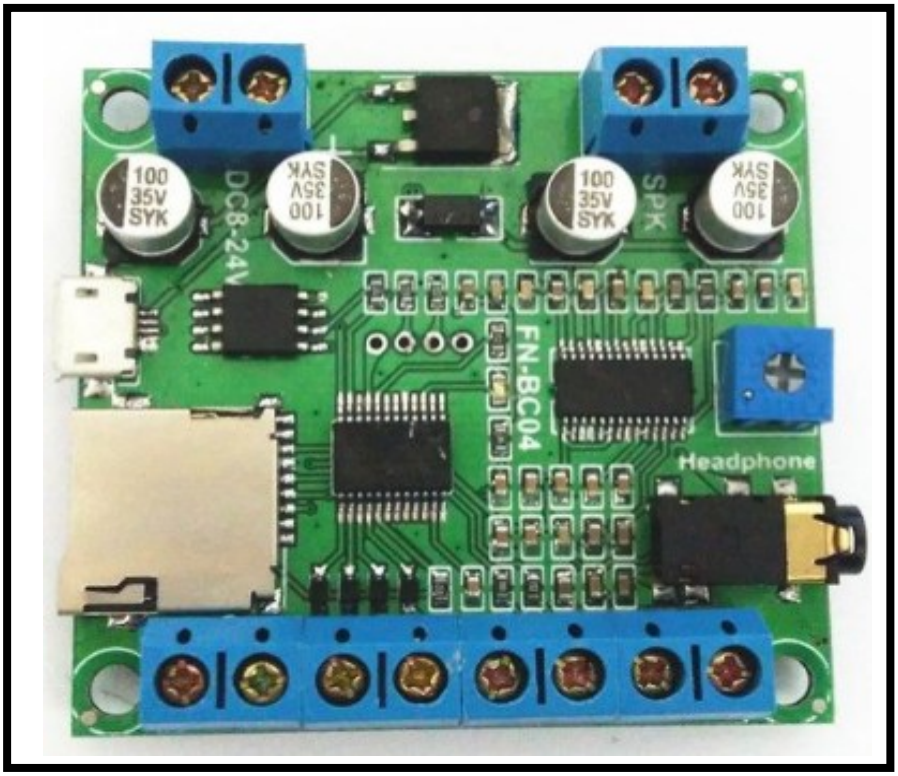
Purchased at Amazon from ELECTRONICS 123.COM, Inc.
4 buttons triggered MP3 player board with 10 watt amplifier
Runs on 9 Volts to 24 Volts DC power
A 10 Watt amplifier built in.
4 Channels to record sound to the chip of 15 seconds of each sound
Will play either MP3 or WAV formats for sound
Can attach a head phone to listen
Mini Memory card
Mini USB port to hook up to a computer to transfer sound bits to the chip
Can be set up to run through the 4 channels continually however the drawing is to run only 1 channel an it is activated by pushing an external button.
Timer is set to run at 16 seconds, Sound is 15 seconds
This allows the sound to complete before allowing activation to be reset

RELAY

At rest with no activation

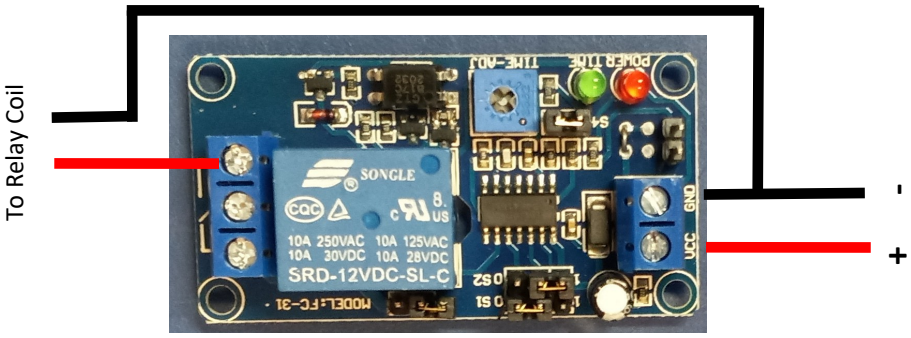
If button light is used the button light is lit
Timer activation is run through as activated (Circuit completed and activation of timer started when button is pushed)
I have run the Sound card power through the relay to be off (Power is turned on when the relay is activated)
I have run the Sound card activation as off (Activation will be turned on when the relay is activated)
Speaker is connected by 2 leads to the sound card.

Sound Card Components



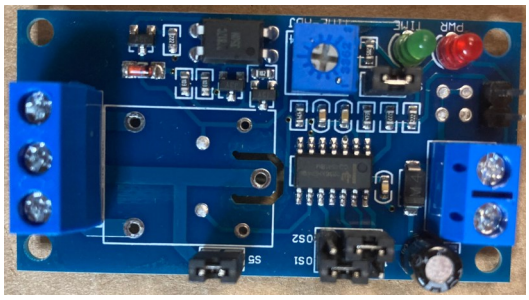
1	9 to 24 Volt DC power
2	Speaker connection
3	Sound level POT
4	Ear Phone Audio Jack
5	Trigger Control Pannel
6	Mini Memory Card Holder
7	Mini USB port to attach to a computer

Timer Wiring Choices



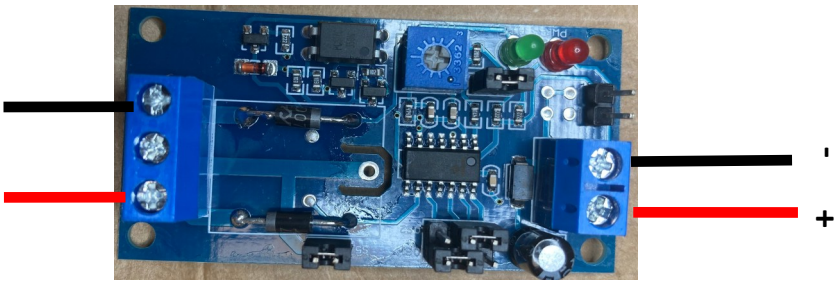
This is the original Timer purchased as of today and it looks the same.

This timer is wired to activate a 12 Volt DC Relay by activating the timer's attached relay. The timer/relay is a one circuit relay as purchased and can use the same power source to use the



This timer is shown with the Relay removed. I have used these timers after removing the relays mostly

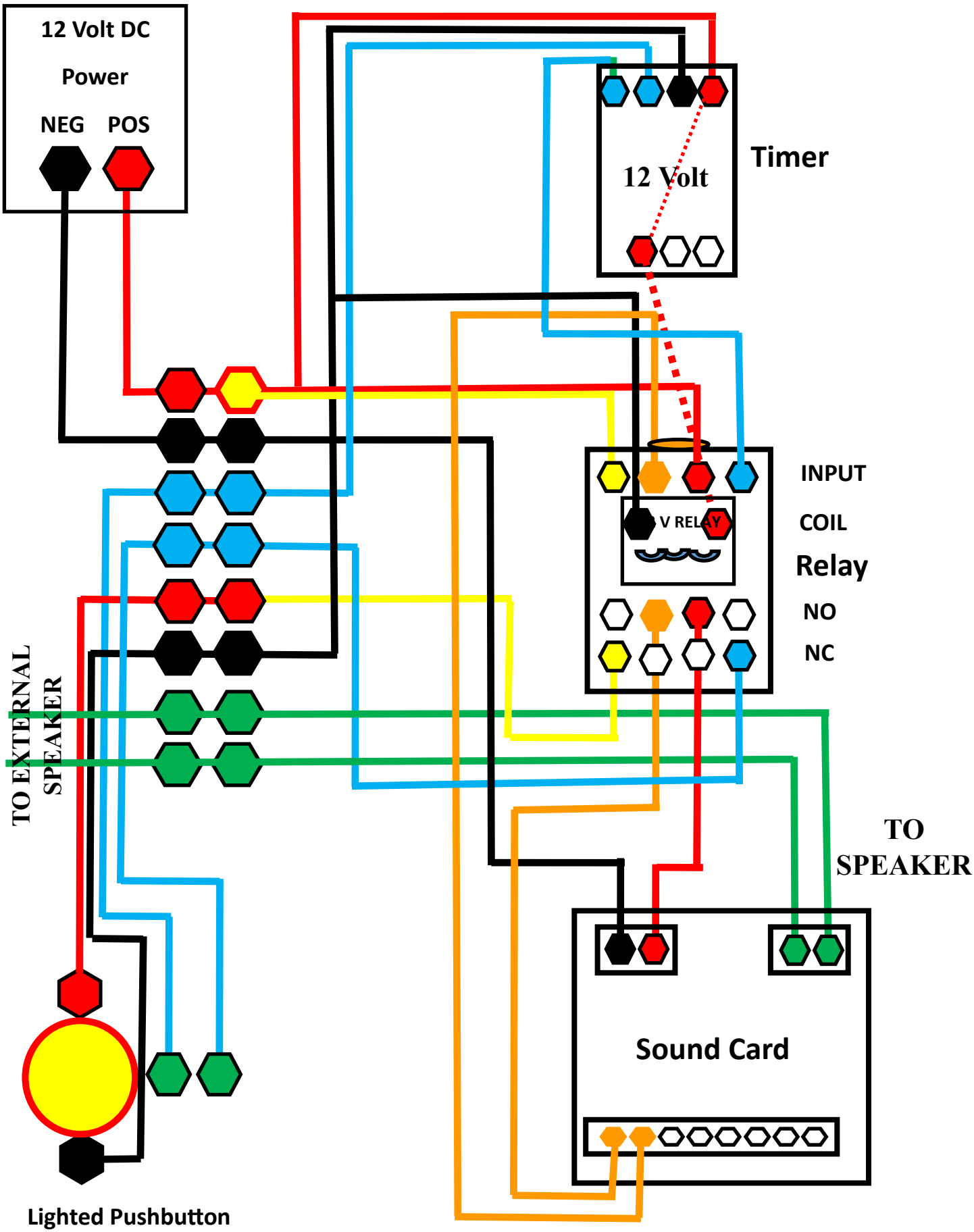
because some of the attached relays have failed. The timers seem to work



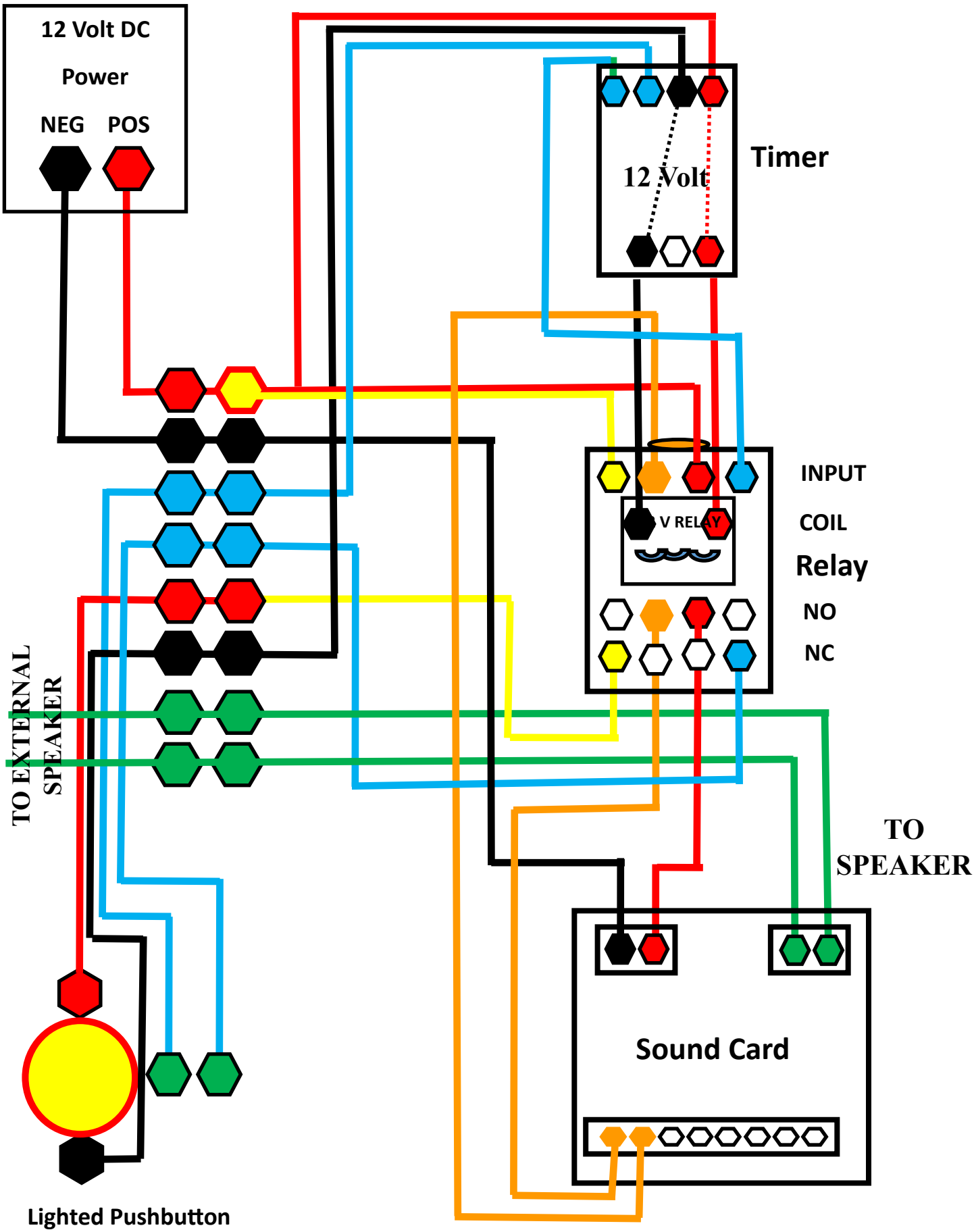
This timer is shown with two diodes replacing the relay.

After I removed the attached telay I then soldered in two diodes across the solder points of the relay. This allows me to wire directly through the timer to activate another relay.

Timer to Play the Sound as Recorded w/Factory Timer

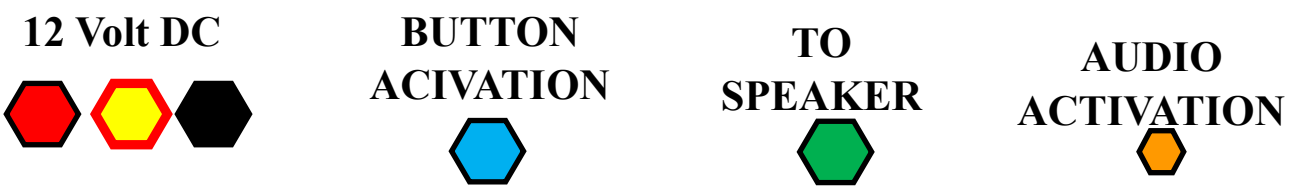


Timer to Play the Sound as Recorded w/Revised Timer



Wire Colors

12 Volt DC Positive Input……	12 Volt DC Positive to Timer and Light
12 Volt DC Negative Input……	12 Volt DC Negative to timer and light
Button Timer Activation……..	Button Timer Activation to Timer
Button Timer Activation……..	Button Timer Activation to Timer
Button Light Positive……....	Button Light Positive from the Relay
Button Light Negative……....	Button Light Negative From Power source
Wire to the speaker……..	Wire from the Audio Card
Wire to the speaker……..	Wire from the Audio Card



Audio Activation is activated through the relay and not the terminal strip.
Color Orange is for identification of the wiring as the other colors for their wiring use.

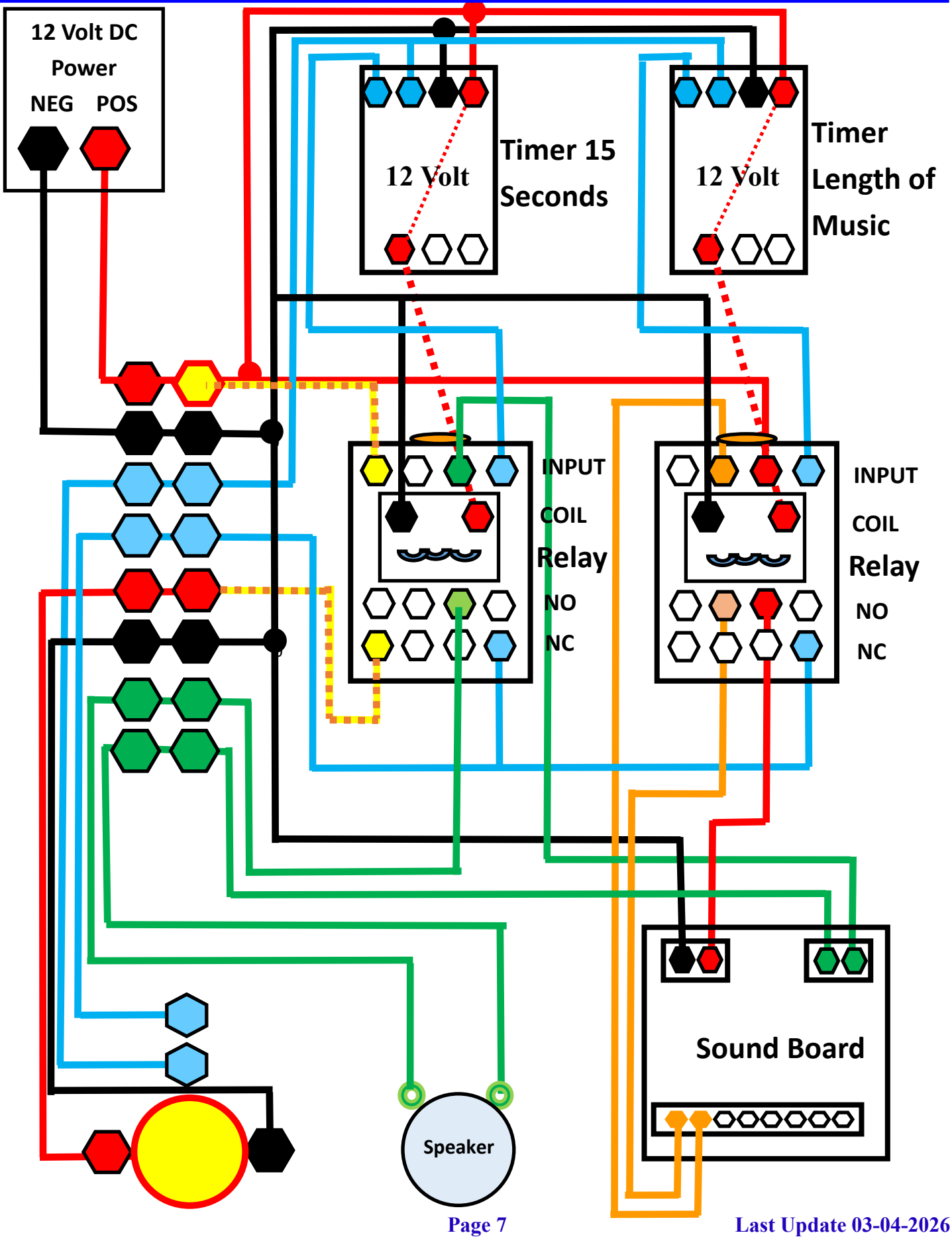
12 Volt Timer
See page 6 for time settings

Note that on the following page is a diagram that allows you to have a sound playing for an extended period of time. The timer for the sound card has to be set to allow the sound to play to the end.

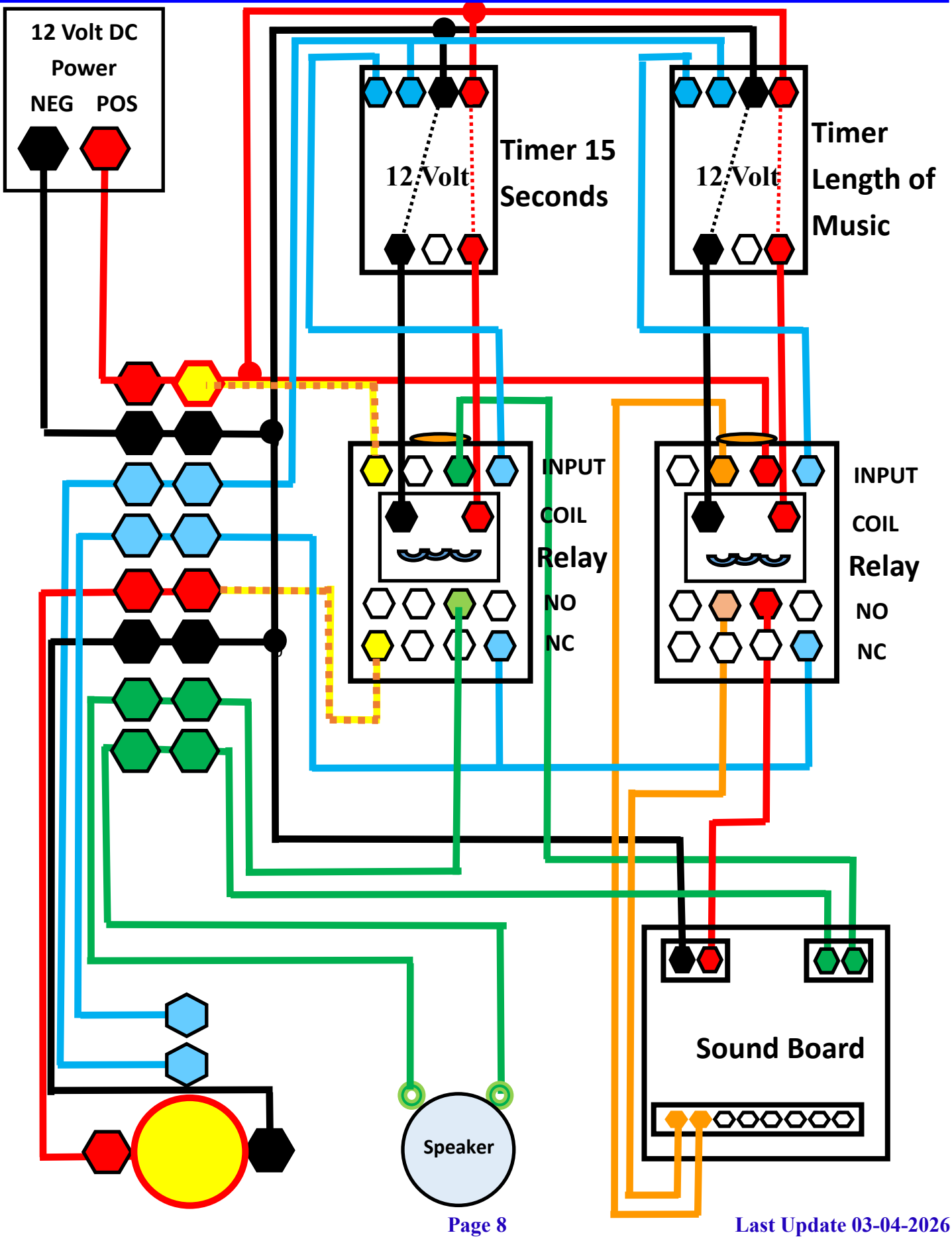
The second timer is set to allow the speaker to work for up to about 15 seconds to play only part of the sound on the sound controller SD card.

The sound will not play unless the button is pushed each time while the sound card is active.

Timer to Play Parts of the Sound as Recorded w/Factory Timer



Timer to Play Parts of the Sound as Recorded w/Revised Timer



Time settings

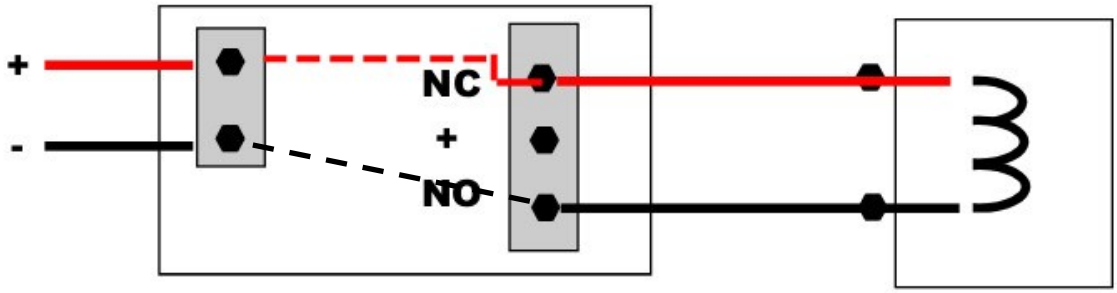
12 Volt DC Power supplies both the timer and the item timed to work with an internal connection.

S1 S2 — 1 Second to 15 Seconds

S1 S2 — 1 Second to 60 Seconds

S1 S2 — 1 Minute to 8 Minutes

S1 S2 — 6 Minutes to 60 Minutes



S5 leave attached to run the relay From the timer power 12 V DC

S1 = Switch 1
S2 = Switch 2
NC = Normally Closed
NO = Normally Open
+ = Positive DC
- = Negative DC
Activation Wire Pin +

PDF-12 Volt Timer diagram