# SANTA HACK USING LOR

here is how it went for any of you who want to control Santa.

I have found that unlike mr.mcormics how to on line.. each gemmy Santa's wiring colors are different (probably due to different years or the cost of wire)

My Santa's wiring did not match the description in the McCormick web page.

Also I decided not to use Santa's hip swing. (green/blue wire)

I used a 12vdc wall wart(power brick) to feed the 12vdc to the with/black pair to run Santa's mouth the red/brown wires feed Santa's head. Santa's head is reverse polarity so I went and picked up a 12vdc DPDT(double pole/double throw relay to work the head motion.
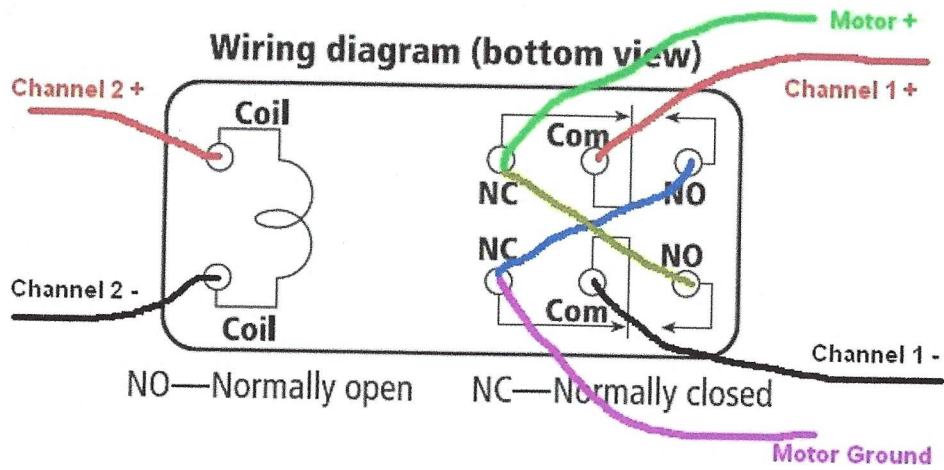
Before I go into the DPDT wire up I wanted to say that I decided not take out the entire mother board from Santa. you may not need to do this if you have a later model year as there may be an aux jack on your Santa. I have seen where gemmy's with audio jacks are not hacked but yet the audio feed from the LOR board is fed into Santa thru the aux jack.

However I did not have an aux jack so I decided not to use their board but to use my LOR board with 2 12 vdc and 1 5vdc wall warts.

I picked up a bunch of wall warts for about 1 a piece.

Ok with that all said. I disconnected the main wiring harness form the mother board. I then connected 1 12vdc wall wart to the white and black wires to open Santa's mouth. His mouth is spring loaded so it automatically closes when no power is applied.

Next to make his head move I purchased a heavy duty 12vdc DPDT relay at radio shack you can also get them at all electronics .com. I crossed the normally open with the normally closed and then wired the wires to Santa's head motion. I used a 12vdc at the coil and 5 vdc at the common switch.

**Wiring diagram (bottom view)**

Motor +

Channel 2 +

Channel 1 +

Coil

Com

NC

NO

NC

NO

Channel 2 -

Coil

Com

NO—Normally open    NC—Normally closed

Channel 1 -

Motor Ground

I hooked the wall warts up to LOR. Channel 1 was the 12 vdc coil and channel 2 was the 5vdc. Whenever the 5vdc was applied his head would turn left but when not applied would revert to the right.

I hope this helps you with your Santa hack.

here is the how to....

1st run out to Radio shack and get a 12vdc dpdt (double pole double throw)relay.

2nd run out to the nearest thrift store. Pick up the following wall wart power converters....

2 120vac to 12vdc 300ma or better.

1 120vac to 5vdc 200ma or better.

Ok here we go.. you will need 3 channels from you ac powered computer control board. One channel for his lips one channel for his head turn and 1 channel to power the coil of the relay.

1st find your wiring harness in Santa's boot then you will need to trace back the wires.

1 pair will operate the swinging motion (I chose not to power that)

1 pair will operate the head turns

1 pair will run into the head to operate the lips.

once you have determined which does what then cut them from the board.

connect it this way...

1 Connect 12vdc wallwart(power brick) to feeds 12vdc to the white/black pair to run Santa's mouth.

2 Connect the red/brown wires that feed Santa's head. to the relays last 2 pins.

. . . .

coil nc 5vdc no comm

. . . .

3 connect the 5 vdc to the middle 2 pins where the throw common switch is

4 connect the 12vdc to the 2 coil pins

5 Cross 2 wires between NC and NO pins

To Test them with LOR

Place the 1st 12 vdc wart into your computer board and then turn the board channel off and on in the hardware tool channel tester.  The mouth should open and close.  If not make sure your wires are not crossed.

next test the head motion plug in the 12vdc wart attached to the coil to the next channel. and attach the 5vdc common from the relay center pins attach it to the board. then turn on the channels that will control the common and the coil for the head turn.  Turn on and off the channel to the 12vdc attached to the coil.  With power to the coil applied the head turns one way and with the coil power off the head will turn another way.

walla your done.