

## THE ANIMATED BAND "The Wrappers"

In 2005-06 Gemmy came out with a 3 piece animated band set. In different combinations

Santa and elves

Santa and reindeer

Polar bear and penguin

Santa and Snowmen

I set out looking for these and was able to pick up two sets Santa and elves and polar bear and penguins off craigslist for about 50.00 each.

Although I had no idea how I was going to do this, I had my heart set on an animated band that played while the display was running. I began to plan the band shell and how I would make this work. I began to sketch out what each figure would do. I decided to use one of the 2 penguins as a keyboardist and the other as a guitarist. One of the elves would be used for a drummer while the other would be a bass guitarist. Since I had a live size santa scene I decided to use the polar bear with the microphone as the lead singer. I tried some initial testing using the original control board from the gemmy set and combined 2 pieces together to one side of its controller and 2 other figures to the other side of the controller but that did not work the draw required more that the gemmy control board could handle and the pieces moved slow and sporadic. Frustrated no knowing how to make this work it got shelved for a few years

Then in 2008 the answer to my controlling the band arrived, LOR came out with the new CMD-16dc board. I picked one up in the first year of it on the market in the summer sale got it for 119 bucks. And then began to put it together Here is how I did it...

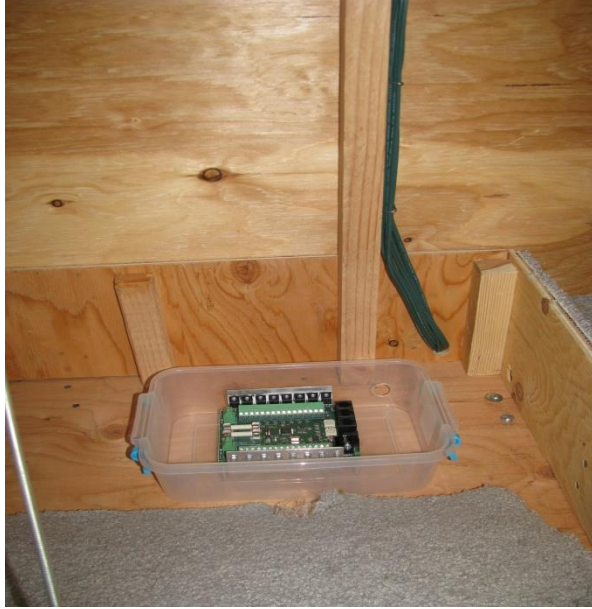
The band shell

I ripped a bunch of 2x4 into 1x1" framing posts and used 1/2 in plywood.

Here you can see the band stand take shape,



I wanted to offset the drummer and the key boards. so i began with the platform being a 3 tiered plan with the drummer platform bring about 3 " higher than the Keyboards and then the main platform being 3" shorter than the key board platform and 6 inches lower than the drummer platform. With that in mind I decided that since the drummer platform was 6" high I could fit the LOR board in under the drummer platform. This would protect it from the elements.



After the platforms were constructed, I then built the shell which you can see here.



Drum set. I took the drummer elf on a fact finding mission to home depot boy the looks I got. I went looking for duct work or piping something cylinder that can be used for drums. I found 4" PVC pipe ends and 6' pvc pipe ends PERFECT!!! set them up next to the drummer and it was amazingly to scale. 20.00 and I had all the pieces for the drums.



## The Drum Set

2 4" pvc pipe

1 6" pvc pipe

Acrylic fluorescent light cover for drum tops.

4 1/4 threaded rod for cymbals

Cymbals 1 quart Glad lock plastic lids and hammered gold paint.

Drum sticks made from 1/4" dowel.

First I drilled the holes into the drum and bolted the 2 top drums to the big bass drum. Then I removed the top drums from the bass and then I cut and added the fluorescent light cover I used silicone to glue the covers to the Drum. Then I too red auto pin striping to add the accent striping on the drum. I took the bass drum to an artistic friend who painted "the wrappers" on the drum in a ribbon font.

To keep the paint from chipping off the bass drum, I covered the bass drum with an automotive clear coat and then red pinstriped the radius of the bass drum cover.

Put it all to ether and then set the drummer and drums together. PERFECTION!!

The Keyboardist.



I used 1/4' plywood to kae the keyboard and then using a korg keyboard and my muse i made the keyboard look exactly like that. i cut a sx4 to the angle needed and leght to run the length of the key board. I then painted the boxboard key area in white. Let that dry and then I taped it off painted the black and then using a permanent black paint marker i drew out the keys.



Then I made the legs notching the middle of the legs to that they could cross. Then painted the legs gloss black and attached the keyboard to the legs. I used 1" white adhesive vinyl letters to make the name KRINGLE and C/1225 for the back of the keyboard (since all manufactures put their names on the back of the electronic keyboards)

I then carpeted the 2 bases and then centered the drummer and drum set. Marked them and then attached them to the platform base and set them aside. I then did the exact same thing to the keyboardist.

The Guitarists.

Both the Bass and Electric Guitars were made from ½ in ply wood the electric was painted red and the Bass in Blue. The necks were painted black and the strings were made with Silver Auto Pin striping.



They were centered in the lower platform marked and installed.

The lead singer (the polar bear) had no cosmetic work done to him.



He came the way you see him. He was centered on the lower platform and installed.

Wiring up the figures to the controllers...

This was the most tedious part of all figuring out the DC power draw on each figure so that they could be connected to the LOR board correctly.

Here is the wiring scheme for the elves and the penguins....

Hips and arm movements are WHITE(-) GREEN(+)

Lips YELLOW(-) GRAY(+)

Spin base is REVERSE POLARITY. Black wire(-) Counterclockwise and Black wire(+) Clockwise. RED wire(+)Counterclockwise and RED wire(-)Clockwise

I had my multimeter on the wires and the VDC seems a little high at highest setting of 600vdc the following is the volt dc readings

Hips and arms 9 vdc

Lips 5

spin table 9 vdc

The polar Bear wiring Scheme....

Mouth (5vdc) White (+) Yellow(-)

Arm that holds the microphone Is reverse Polarity

counterclockwise +5vdc white (+) Yellow(-)

clockwise -5vdc Yellow(+) white (-)

Hip Swing (9vdc) green(+) red (-)

With that figured out I was ready to install the figures to the LOR controller

Wiring up the LOR CMB16d DC board..

The LOR CMB-16D requires 3 wallwart power converters to operate it

The main power to the board must be 12VDC min 300ma.

Then each 8 port channel bank must also have an individual wall wart. In this case I used a 5vdc wall wart to power channel bank 1-8 as 5VDC and a 9vdc wall wart to power channel bank 9-16 as 9VDC

Here is how I wired up each aspect of the animated figures to the LOR CMB16D DC board.

Ch	description	amps
1	drummer lips	5
2	keyboards lips	5
3	Bass lips	5
4	Polar bear lips	5
5	guitar lips	5
6	polar bear arm	5
7	polar bear arm relay	
8		
9	drummer hips	9
10	keyboard hips	9
11	Polar bear hips	9
12	guitar turn	9
13	guitar 9vdc relay	9
14	bass turn	
15	bass 9vdc relay	

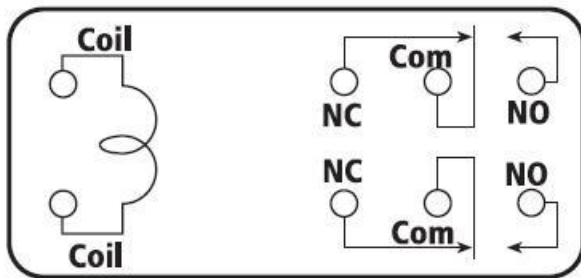
The lips are spring loaded so all they need is a 5vdc power to open and when power is removed lips spring shut. The Hips and arms of the drummer and keyboardist are back and forth motion and are powered when 9vdc is applied and will continue to move back and forth until power is removed and then they stop.

The polar bears arm and the guitarists turns required relays to move them back and forth.

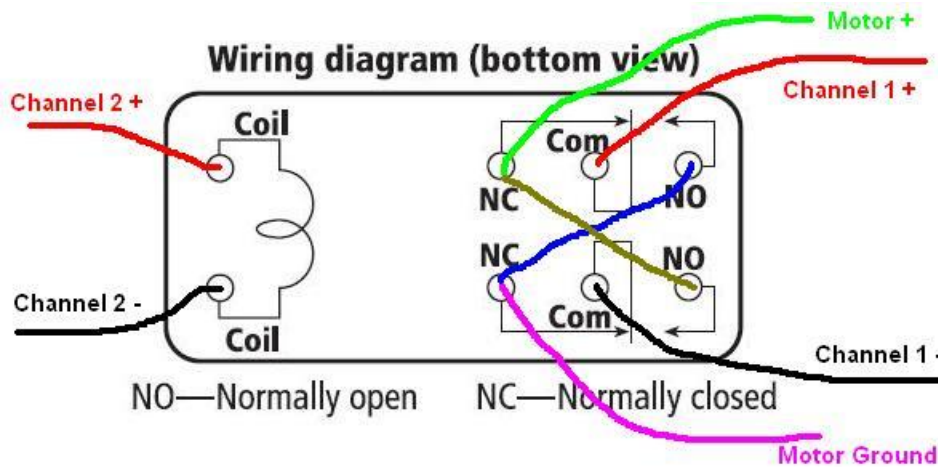
With that figured out it was time to wire up the relays to control the arm swing of the polar bear and the turning of the guitarist.

Using 2 9vdc relays that Ernie Horting sent me I wired up the two relays this way

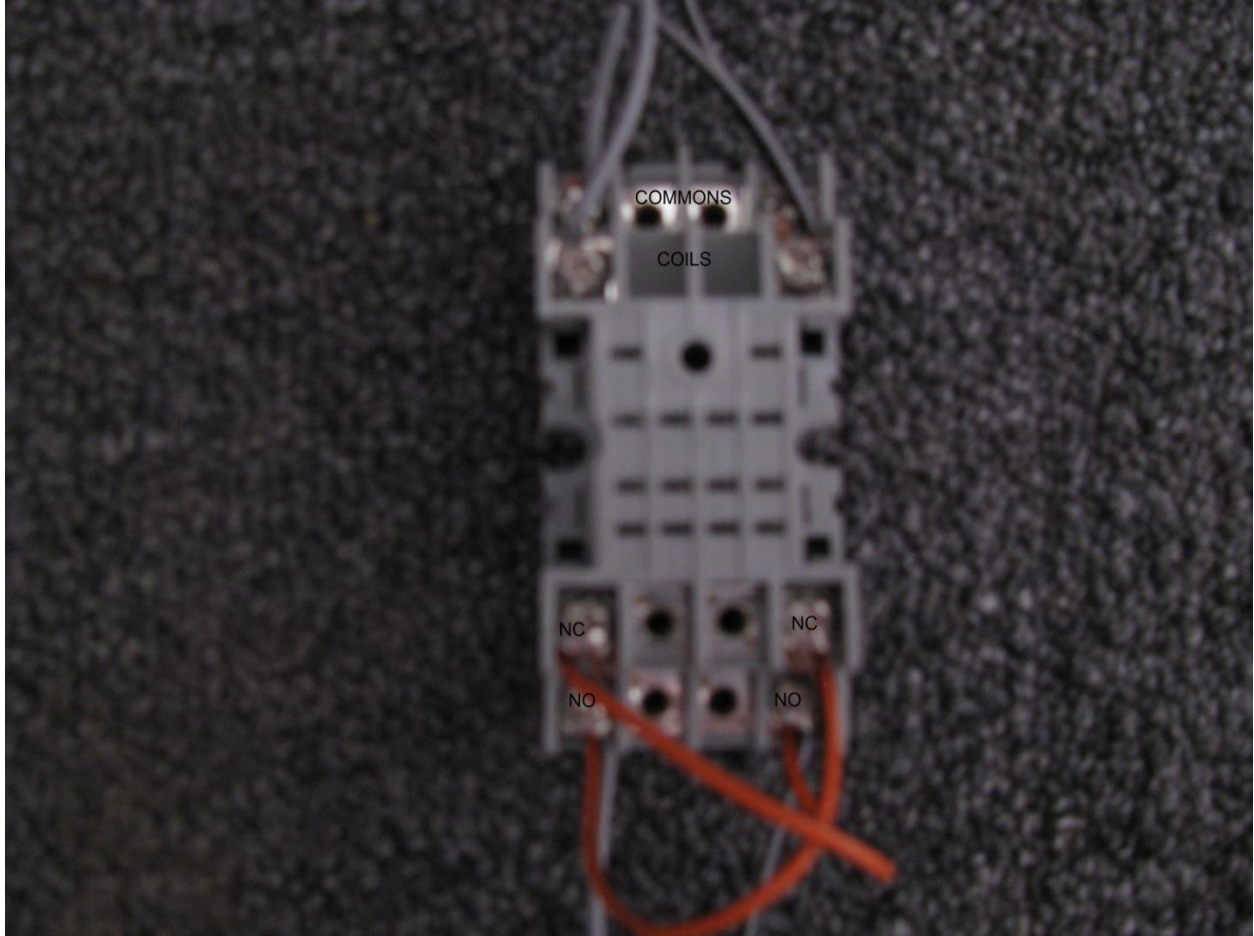
**Wiring diagram (bottom view)**

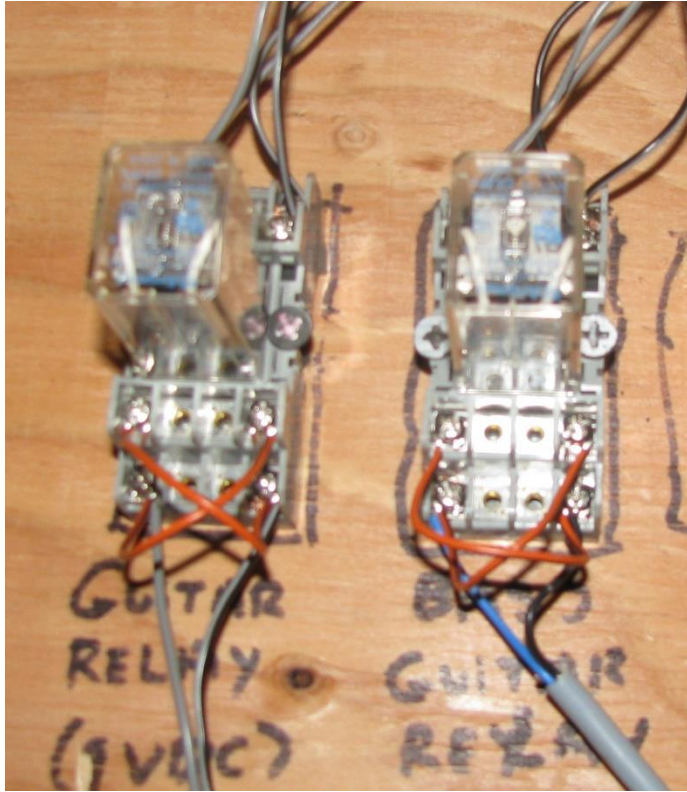


NO—Normally open    NC—Normally closed

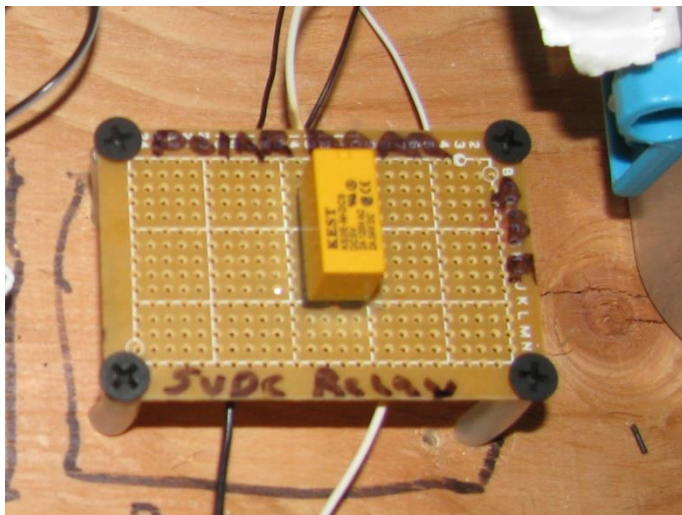




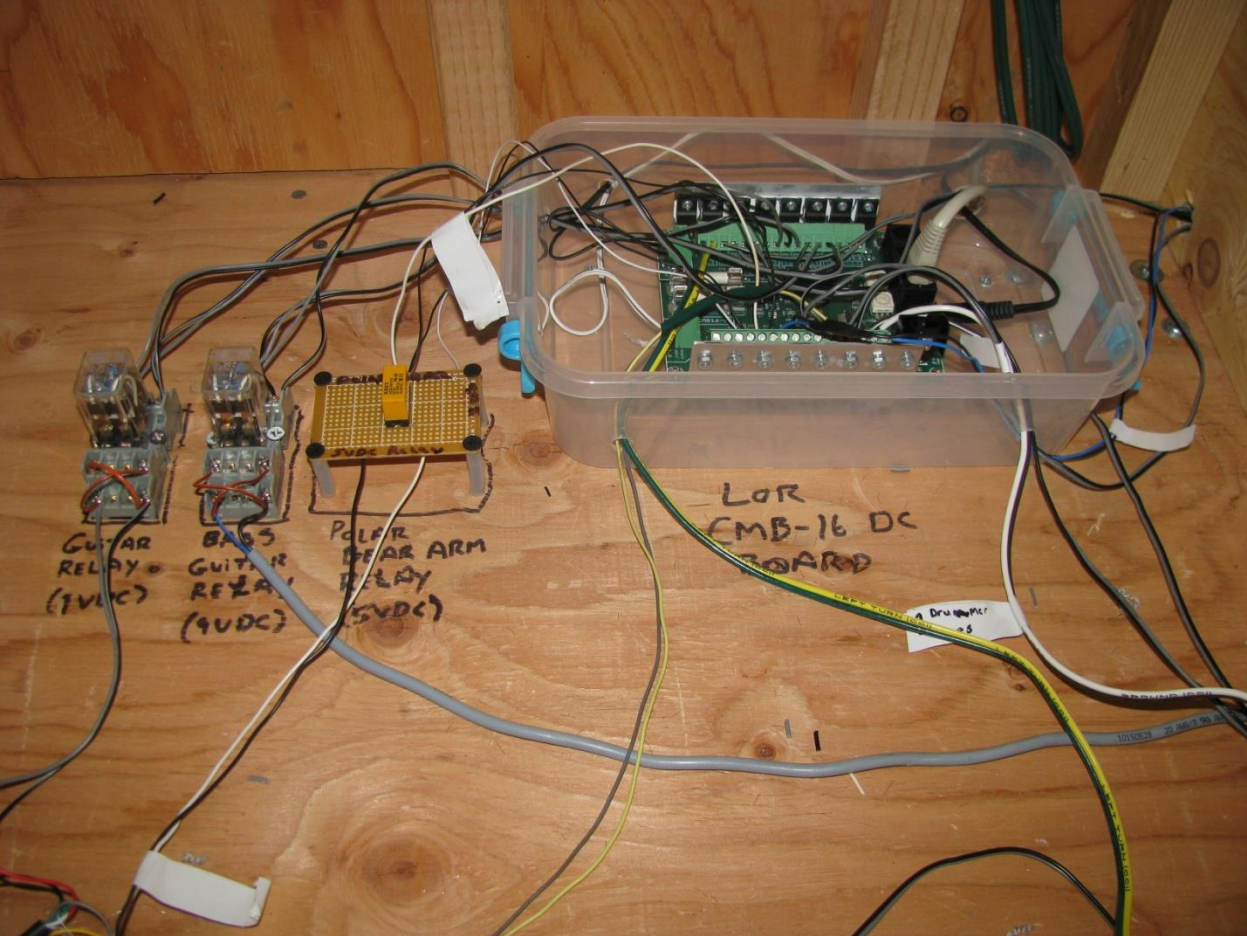




Here is the 5 VDC relay that operated the polar bears arm swing that holds the mic.



Here is the relays all wired up to the LOR board





And with that you're ready to program your very own Gemmy animated Band.



Good luck and have fun building the Animated Band.