

# Satellite System Repairs

Trailer: 2007 Arctic Fox 29-5T

Date: 07-04-10

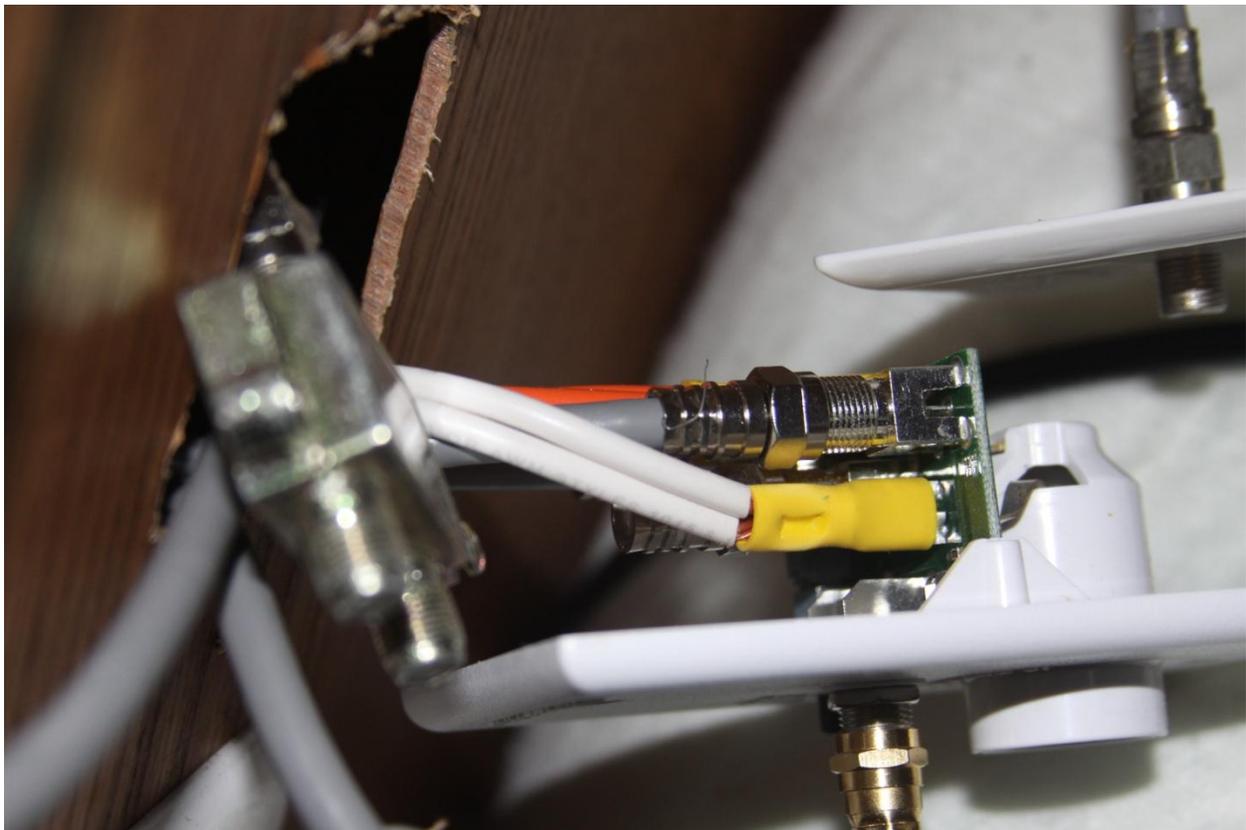
Let's start with a few words about how the satellite system works. As you know there is a dish with an LNB on the end of an arm, cable between it and a receiver. The receiver sends 5 volts down the cable to power the LNB. The LNB receives signals from the satellites your satellite television provider sends out. Obviously if there is a break in the cable the 5 volts and satellite signals cannot travel through the cable. The way that I tested the cables was to short the center conductor to the screw on connection on a short piece of cable I made for this purpose. I used an alligator camp to short between the center connector and the outside screw on part. Then I would test for continuity at the other end of the cable. I used a digital volts/amp meter set in continuity mode to test with. I used another short piece of cable with a longer center conductor to make it easier to place the test leads against.

You can split the signal coming from the LNB to the receiver but you have to use an electronic device called a multi-switch. You cannot place a standard cable splitter in line and expect it to work. One side or the other will work but not both. I learned this the hard way at the YMCA where I work.

Ok, let's look at the cable wiring and system in the 2007 Arctic Fox 29-5T that I have. We ordered the trailer with an automatic roof mounted satellite antenna. It works great as long as there aren't any obstructions in the way. When there are, it does not do well at all. So I thought I would get ahead in the game and get a ground based satellite dish to use when I was parked where trees or other obstructions interfered with the roof unit.

I tried to connect the ground dish to the receiver in the trailer using the coax connector in the little flip up box where a sticker says, "Wired for Winegard digital Satellite System. Nothing. Ok, let's try the park connection as they may have been reversed. Nothing. Ok, give up on this for this trip.

Get home and I remove the white plastic Winegard plate that has the antenna booster switch on it. The picture below shows the back of the plate. As you can see, one of the cables has pulled out of the screw on connector.



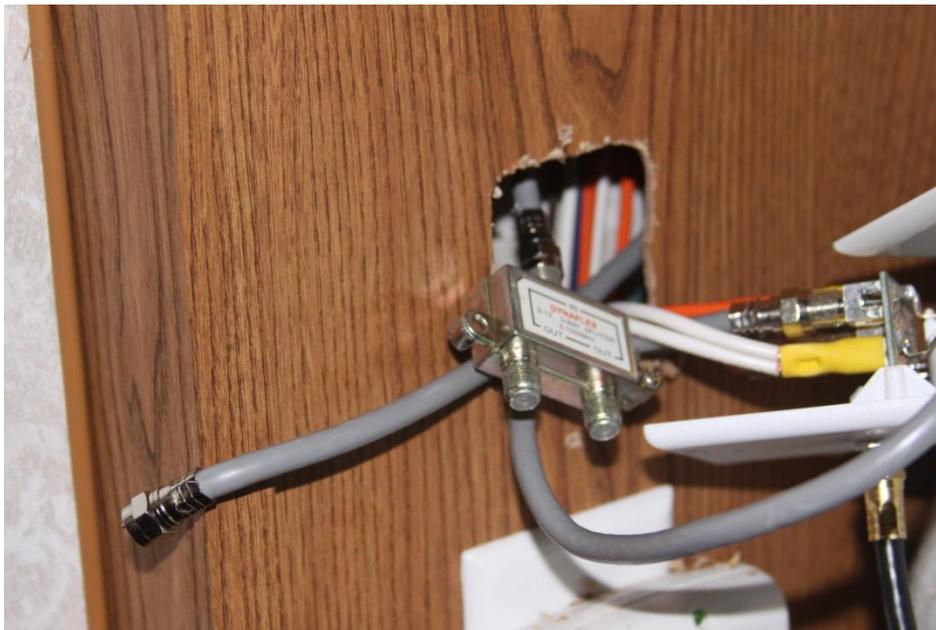
The cable for the park cable television has pulled out and dropped somewhere in the wall. You can see the screw on connector just below the two white wires. So this is why the park cable did not show any continuity.

I pulled out the instructions and manual that came with it and read it (finally). When the booster switch is on, the system is connected to the roof mounted batwing antenna. When the booster switch is off, the system is connected to the park cable. The system has a device to stop a satellite receiver from sending voltage down the cable line. This is another good reason why the ground dish would not have worked when connected to the park cable connection.

One problem found, let's see what else is not working. I removed the plate that has the connection to the roof dome, and found that it has a splitter on it. This is a picture of the plate showing the two cables, one for the roof dome and the other leading to the plate in the bedroom so you can watch satellite in there. Now we know why the external connection was not working. The splitter usually works on one side only and not both. I was lucky that the side that worked was connected to the roof dome.



This is a picture of the splitter once the cables to the external connection that says “Wired for a Winegard Digital Satellite System and the roof dome have been removed.



So what to do? Simple, I will drill a hole between the other holes in the upper plate and wire the roof doom to the lower connection like it came from the factory, the external connection to a center connector, and leave the cable running to the bedroom in the same position it has been in. Make a label for the center and top connector and we are done with that. The splitter will be removed. To use the external connection, you simply connect the receiver to the center connection. To feed satellite to the bedroom, you have two options. Option one is to connect the output of the receiver to the bedroom connection and leave the receiver where it is. The second

option is to make a short jumper cable to connect either the roof dome or the ground dish to the bedroom connection and move the receiver to the bedroom. See the picture below.



The center connection has been installed, the plate mounted back on the wall, and each connection is labelled for future reference. Prior to installing the plate, I tested the connection to the external satellite input to make sure that the cable was working. It was so this is the end result. Now I can use the external connection with the ground dish.

Ok, time to work on the Winegard antenna booster and its connections. First of all, we crimp a new connector on the park cable line. Then add a barrel connector (also known as a pass through connector) to connect a short piece of cable to take the strain off of the park cable. Then to protect it and your electronics from electrical short circuits, we wrap metal parts in electrical



tape. This is done since the unit is close to a 120 volt outlet. I did not want to take the



chance that if the metal barrel was to come in contact with the 120 voltage, it would conduct power to the other electronics. Note the “tab” left on the end of the tape. This is for the future if



you need to remove the tape for some reason. Next we feed the cable back through the hole in the wall and connect it to the Winegard park antenna connection. I had to take the power lead off and one of the other cables in order to have enough room to work. The assembly was then tested to make sure that the cable connections were good. I used the same device to short the center lead to the outside screw on connector. Reconnect the power

leads and test them to make sure that you have power to the booster and switch. The assembly was then mounted on the wall again.





As a final touch, I added a label to tell me what was happening depending on the position of the power switch on the Winegard antenna booster. I hope this helps you are are having trouble with your satellite system. My wife loves this no cussin' no fussin' approach. Now if I can just get the hang of aiming the ground dish.....