

More problems of FM-SSTV: an article to educate

When ever I see a common problem I understand, I think: It would be nice if I could help others to understand it also.

This one is not a big problem. It is more of an annoyance. I'll call it the Hot Mic Syndrome. It is sort of like the ham that leaves his microphone on the car seat, then he sits on it, or it gets wedged in between the seat and the seat back. Of course that locks up the repeater, times it out or burns up his rig. (Doesn't any one use the auto-time-out on their modern rigs?) In the case of SSTV, nothing so drastic happens.

The effect is: During a picture you hear someone say: "Go ahead and order a pizza." or: "Drat that so-and-so yah-who!" It can be funny, or embarrassing to the extreme. The extra audio also messes up the picture a little, although usually not by much. It can cause another degradation in picture quality. And that is why I wanted to write this article.

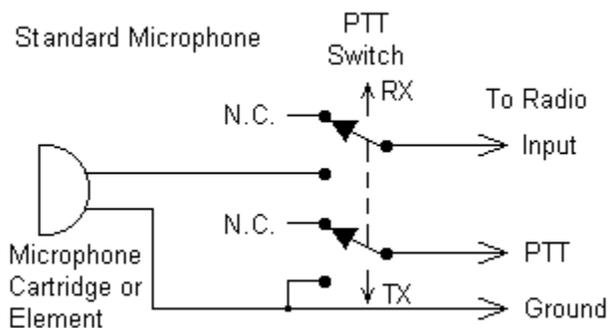
The side effect is: If you have an open mic, the audio from your PC speaker is also getting into the transmitter through the mic. It is already there from your SSTV interface. But if it has two paths into the transmitter, that can cause a "[Ghost](#)" in your picture. It is like the room echo so evident in the signals from some hams using acoustic coupling. For more examples, see references below.

The cause is (this is so simple): The microphone is not shut off during SSTV transmission. Why this is simple, may not be so evident.

First off, if you are using a [Rig Blaster](#) or [MFJ-1275](#) interface, you should NOT have this problem. They foresaw this as a problem and designed their equipment properly. Of course if you wired it wrong, you may still have the problem.

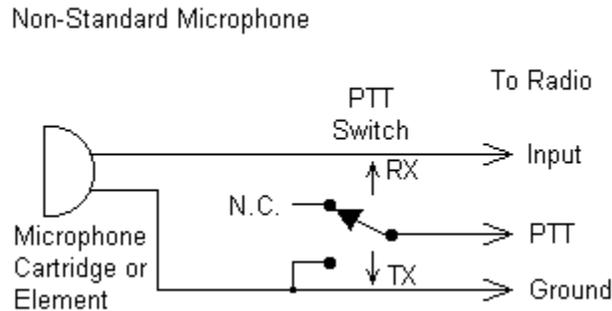
Secondly, if you are using a [nomic](#) from Rigblaster, you HAVE this problem. Stop trying to pinch a penny and purchase the right equipment.

Then; why would anyone have a Hot-Mic on SSTV? Let's look at the schematic for a standard hand mic:



You can see that the PTT switch has one section for PTT and another for the mic element. Both operate in unison. This is a double pole, double throw switch, like a dual switch.

Now a non-standard hand mic:

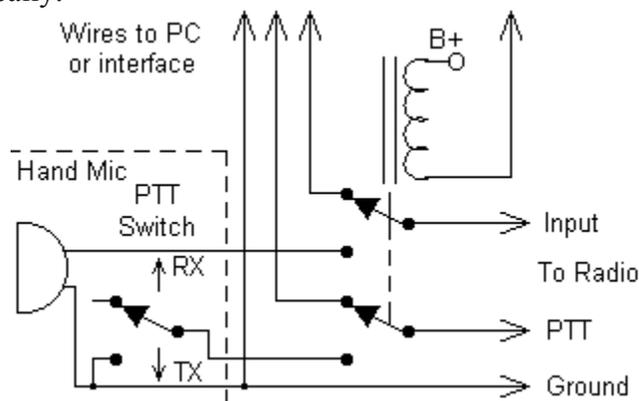


Only one switch. The switch takes up less room and costs less. The radio simply ignores the input from the microphone in receive mode. But this is what caused our problem. We are forcing transmit mode, but we want to ignore the mic element and instead transmit SSTV audio from the PC.

The cure is: Turn off the microphone.

OK, not so simple, I admit. You can do it with a relay (like Rigblaster does). That means you need a source of voltage to run the relay, and a way to trigger it. You also have to wire the relay to switch the lines correctly. The other way is to use a switch. That adds operator inconvenience, a chance for operator error, and another part to fail someday.

Here it is schematically:



To use a switch in place of a relay, use the same schematic without the coil.

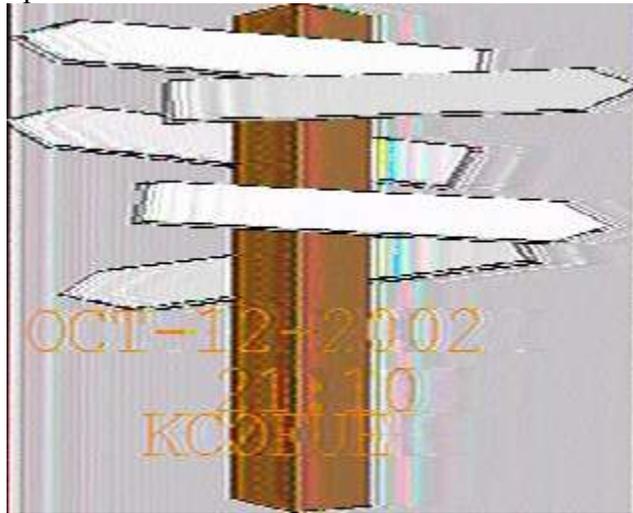
References:

Note: mic = microphone = mike

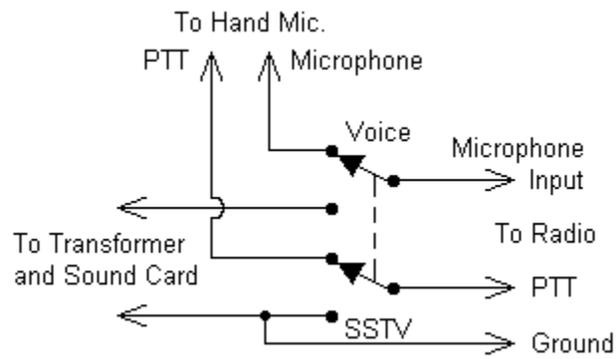
Bane (Bane.pdf)

Foam (foam.pdf)

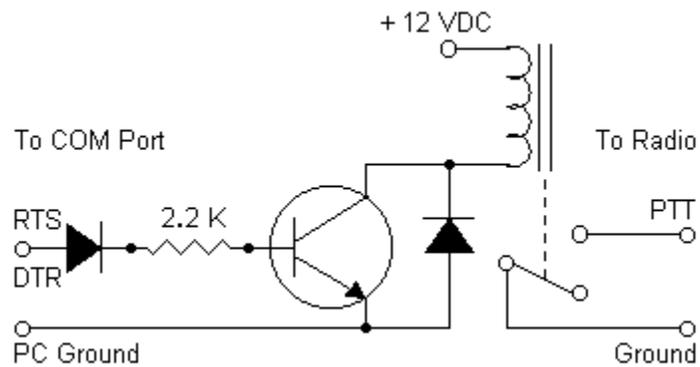
Ghosts & other examples.



sx-ptt



relay



Rig Blaster <http://www.westmountainradio.com/RIGblaster.htm>

MFJ-1275 <http://www.mfjenterprises.com/products.php?prodid=MFJ-1275>

nomic <http://www.westmountainradio.com/faq.htm#faq1>