Heil microphone at the same time as the HM-151 mic mode

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Here is my method to get my HEIL PS Quiet Phone (headset + microphone) to work at the same time on my ICOM 7000 when using the non-microphone functions on the standard HM-151 microphone. This "mod" makes no changes to your HM-151, your IC-7000 or your HEIL microphone which I think is a plus. This "mod" disables the mike element in the HM-151 but allows all the rest of the buttons to work. It shouldn't take you more then 1 hour to construct this, unless you work slowly like I did, in which case, plan on a couple of hours.

IT IS IMPORTANT THAT YOU USE THE RIGHT 8 PIN MODULAR ADAPTER for your HEIL Microphone with this mod. It has the right capacitance circuit built into it to let it work properly on your radio (Pin number 7). If you are already using your HEIL microphone with your IC-7000 you should be using the right adapter. But make sure by visiting http://www.heilsound.com/amateur/adapters/iCOM.pdf to verify that you are using the right one. Also make sure you read HEIL's ALL THINGS ICOM web page at http://www.heilsound.com/amateur/tips/all_icom.htm for good warnings, settings, information and guidance. Make sure you pay attention to the part on that page about SMOKE CITY!

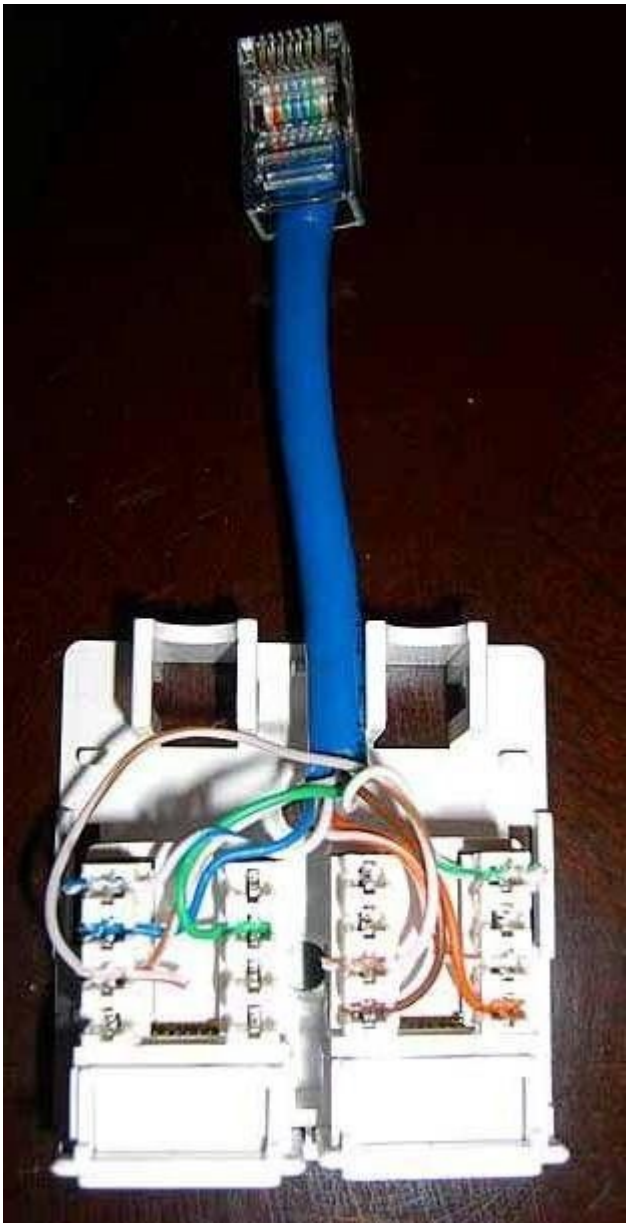
This Mod should work properly with ICOM 706 and 703 series and their respective microphones per the HEIL chart above, but I don't have those radios, so I could not test them to make sure. Remember though that the HM-151 mic will not work with those radios, with or without this mod.

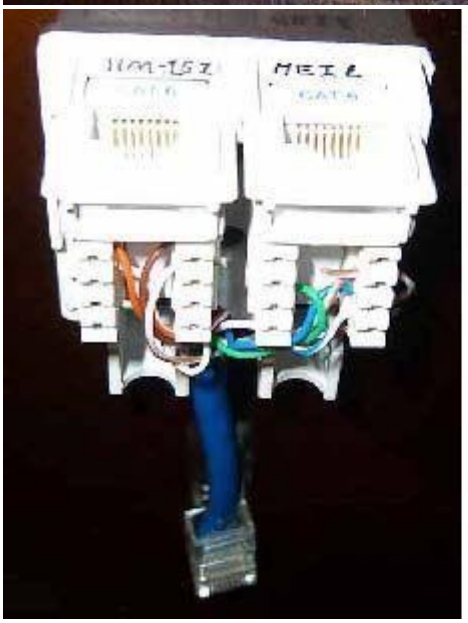
I make no promises, guarantees of any kind that this will work for you like it works for me, and if your radio or microphone gets zapped because you did or did not follow these steps you have my sympathy, but you were warned.

Jeff N6ETE September 2007

These three pictures show the dual modular jack box with the wires distributed between the jack for the HM-151 ICOM and the HEIL modular plug. The plug is just a very short Ethernet cable cut into two and stripped back to reveal the wires inside. I used a CAT-5 Ethernet cable but it would probably work a little bit better with a CAT-6 Ethernet cable. The goal is to keep the cable short, say 6 inches or less. The Jack box also comes with 2 straps to tie down the blue part of the cable tightly down to one of the two exit port stand offs.

I got the 2-PORT CAT6 SURFACE MOUNT JACK from FRY's (www.frys.com) for $12.99, part number UTP-7802W. The Ethernet cable was $1.29 part number UL624-801BU-B.



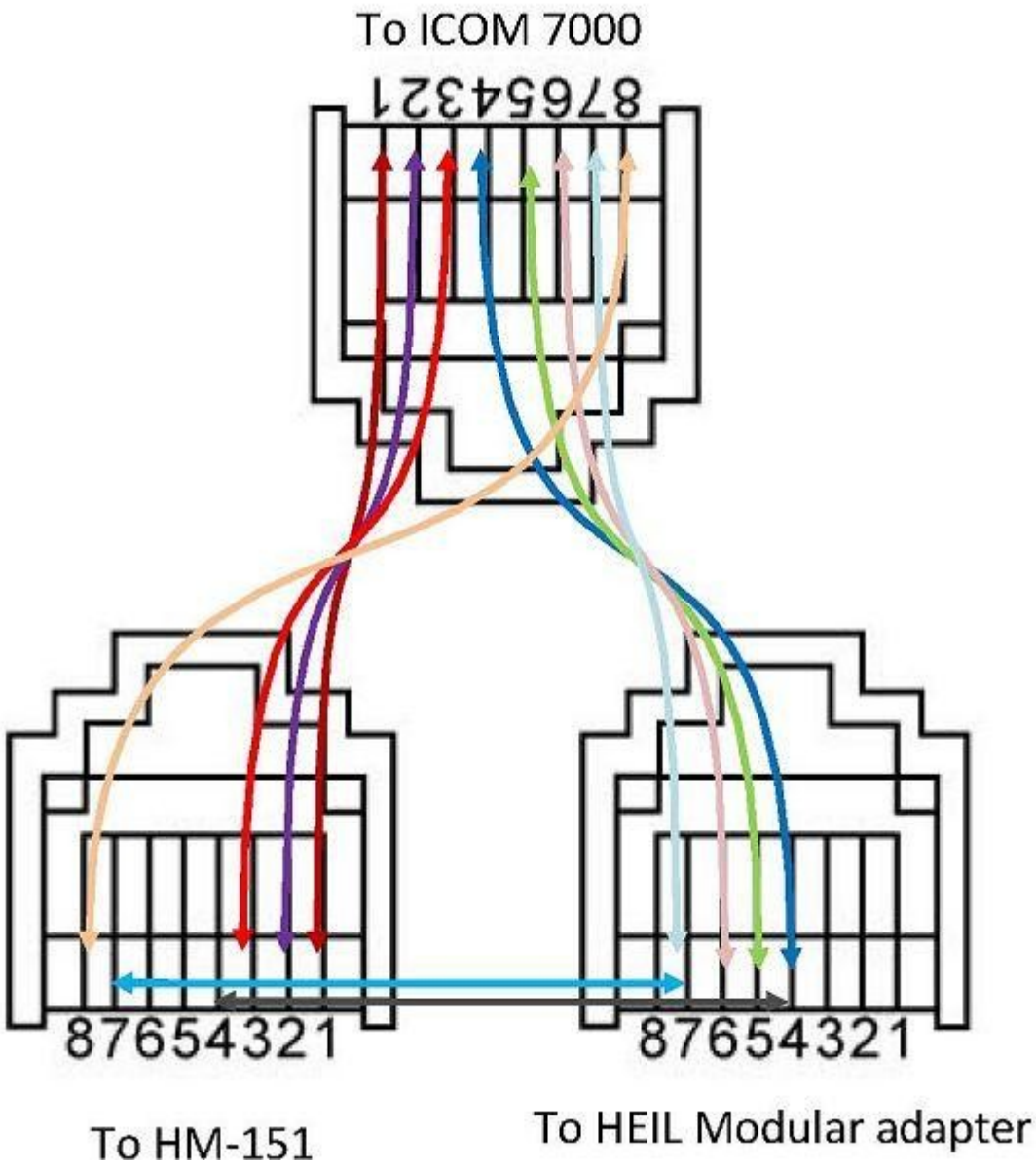


Each line represents a wire. Using the 2 port surface mount RJ45 jack allows you to just push down the wires without having to strip them first. Small caps come with the jack box too to keep the wires down.

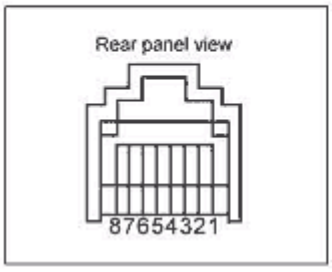
In this configuration pin 4 from the IC700 jack is attached to both the Heil and the HM-151. This lets you perform the Push to Talk (PTT) function from the HEIL Microphone or from the PTT button on the HM-151, its your choice. If you want to have it work on just the Heil Microphone, get rid of the gray wire shown here attached to pin 4 on the HM-151 and Heil plugs. If you want it to just work from the HM-151 move

the blue wire going to pin 4 on the diagram from the Heil adapter over to pin 4 of the HM-151 adapter, and get rid of the gray wire between the two adapters.

Use a Ohm meter to make sure that you have the right connectivity to each pin on the plug that goes to the IC7000 because the Ethernet cable wires have a couple flipped from what you might expect.



MICROPHONE CONNECTOR INFORMATION



CAUTION: DO NOT short pin 1 to ground as this can damage the internal 8 V regulator.

HM-151

① +8 V DC output
② Frequency up/down
③ M8V SW
④ PTT
⑤ GND (Microphone ground)
⑥ Microphone input
⑦ GND
⑧ DATA IN

• When HM-151 is connected

PIN NO.	FUNCTION	DESCRIPTION
1	+8 V DC output	Max. 10 mA
2	Frequency up	Ground
	Frequency down	Ground through 470 Ω
3	HM-151 connection	Grounded to indicate HM-151 is connected.
8	HM-151 data	Control signal input

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