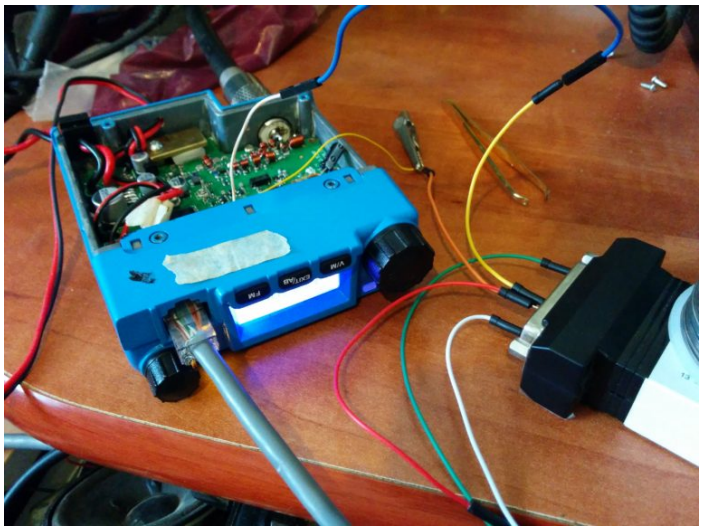
USING THE QYT KT8900 FOR AN ALLSTAR NODE

Ido (https://4x5mg.inphoto.co.il/author/ido/)
February 12, 2017 (https://4x5mg.inphoto.co.il/2017/02/12/using-qyt-kt8900-allstar-node/)



USING THE QYT KT8900 FOR AN ALLSTAR NODE

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DIY Magnetic Loop – Part 1 –

A fellow Ham recently bought the QYT KT8900, a small cheap chinese radio. After few months he had no sound at all, not even menu beeps. dead.

I decided to ask him for the radio and try using it for my Allstar node, that because my Baofeng 888 power is around 1 Watt and I've long coax cable running to the antenna which cause high loss.

After opening it up, I found that the LA4225 audio amp is doing its job and I could see the signal coming from the speaker terminals on my oscilloscope.

Then I tried to solder another speaker and it worked!

PTT and audio

Finding the PTT was easy because it's coming off the mic RJ45 connector in the front.
The Mic input is on pin 3
The PTT is pin 5
The GND is pin 6

I took the audio from the volume knob:

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AllStar to DMR bridge (https://4x5mg.inphoto.co.il/2018/07/16/allstar-to-dmr-bridge/)

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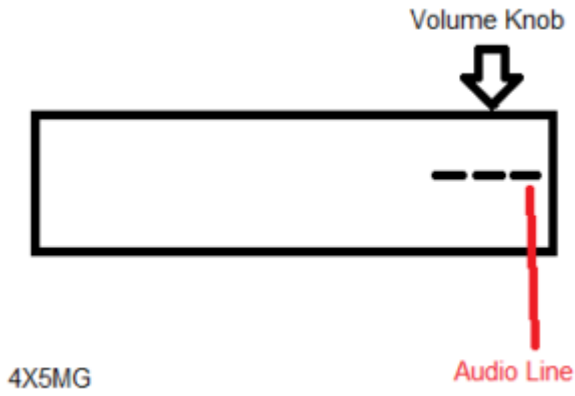
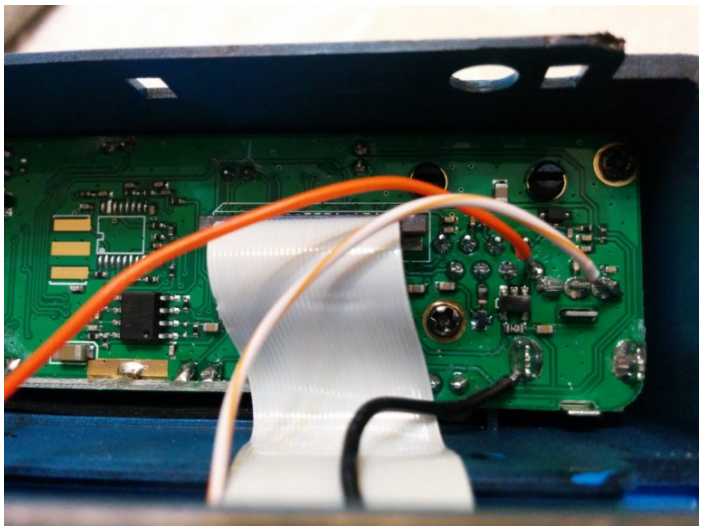


(http://4x5mg.inphoto.co.il/wp-content/uploads/2017/02/volknob.png)
When you open the front panel, you'll find 3 connections for the volume knob, the right one (close to the plastic case) is what you want.



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COR

COR (or COS) was the most difficult to find.
After hours of probing (no datasheet for this radio) I found it on the main IC.

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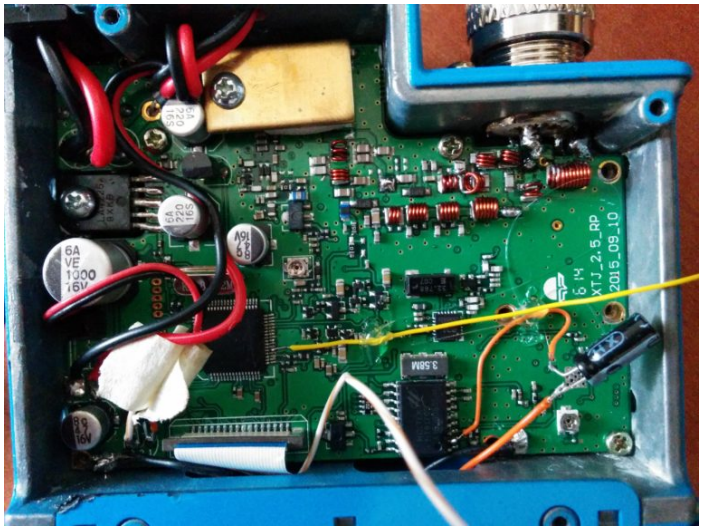
When the front panel facing you, it’s the 5th pin from the bottom on the right side of the IC.
It’s the yellow wire on the picture.



(http://4x5mg.inphoto.co.il/wp-content/uploads/2017/02/IMG_20170212_114344.jpg)

The orange wire is a small mod I added for getting discriminator from the radio. It’s not necessary for Allstar.
You can find the mod Here. (http://www.instructables.com/id/QYT-KT8900-PACKET-MOD/)

The red and black wires coming from the left (over the 1000 cap) are connected to small fan I salvaged from an old graphics card and placed in the groove of the internal speaker.

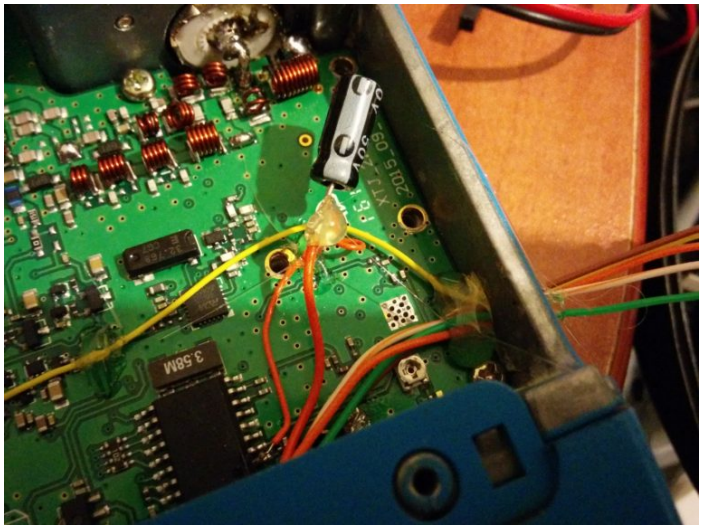
That’s it

Now you have **PTT, GND, MIC IN** from the mic connector.
AUDIO OUT from the front panel and **COS** from the IC.
Connect it to your URI and you’re done.

P.S remember that it’s chinese radio and you don’t want to use it on high power.
duty cycle issues.

Update

I decided to leave the mic RJ45 and route wires from the front panel through the mounting hole in the side.
Prepared DB25 cable and now it’s connected.
Next, i’ve added 120mm fan on the side (Sleeve bearing should work better when mounted vertical) and attached the fan thermistor to the chassis of the radio.
I just need to build small rack to hold the radio and the fan steady.



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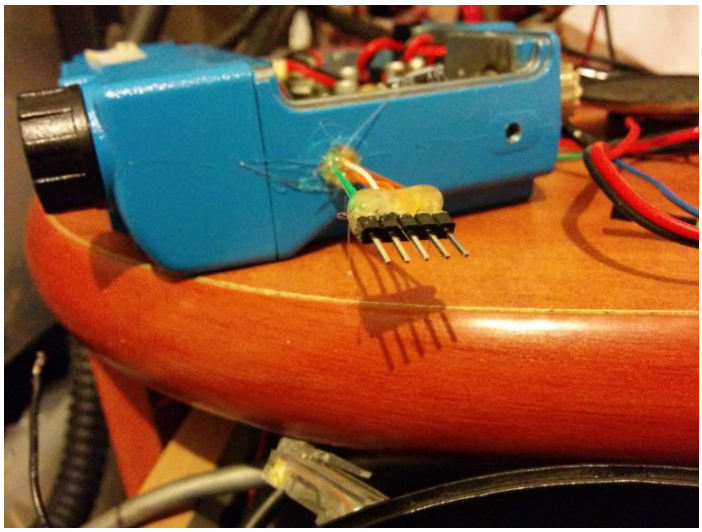

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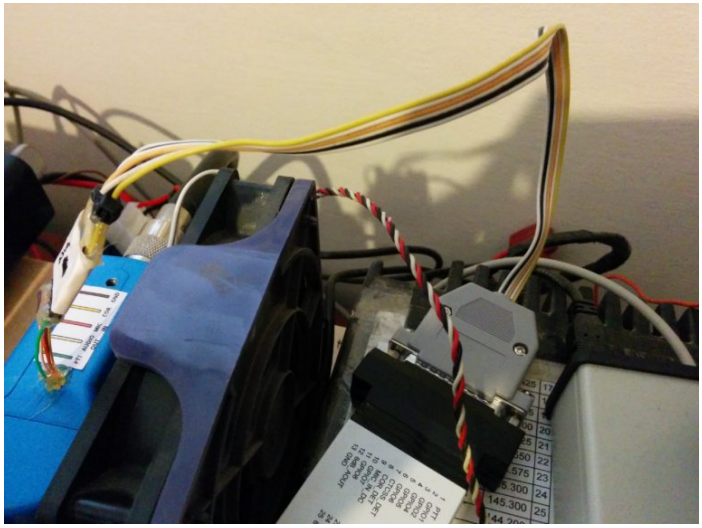

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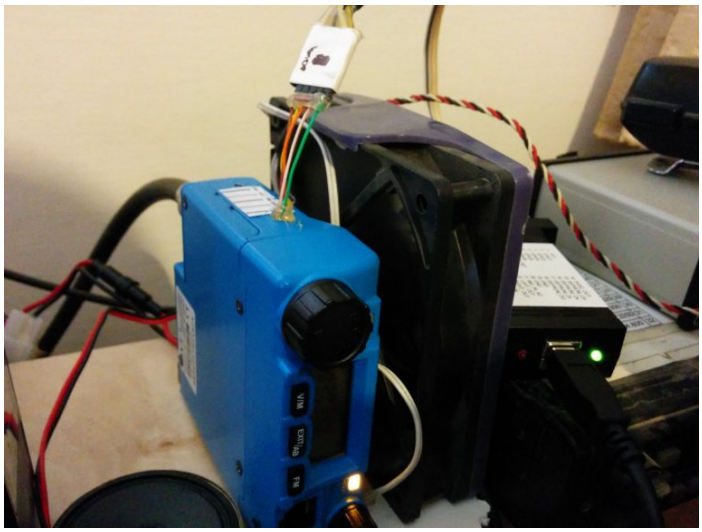

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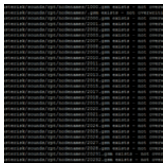
AllStar Node using the Baofeng 888 I recently helped a few guys setting their AllStar…



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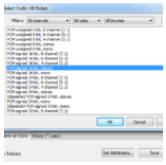
Callsigns instead of node numbers on Allstar If you have an Allstar node you…



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Playing custom message on Allstar node Some background I wanted to play a custom message…

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Name

Tam Thompson • a year ago

Hi y'all, I'm looking for where to find ham radios here in Israel, I'm with Tel Aviv University, from Texas, and this time in Israel (my 4th, and lived here for 6 weeks & 3 months before) and have lost my handheld Baofeng. I would like to buy a similar handheld and a bigger unit for talking Israel to Austin. I saw the club page and plan to show up at a meeting next week. I'm in in Tel Aviv, have FCC General license. Name's Tam Thompson.

Reply • Share ›

Ido N Mod ➔ Tam Thompson • a year ago

Hi Tam!

Welcome to Israel!
You can tune to the English speaking group net every Sunday @ 9pm IST
On Allstar nodes (http://4x5mg.inphoto.co.il/...
It's not worth buying Baofeng in Israel, you better find someone who sell used one or order from eBay.
If you need more help please contact me.
73!

Reply • Share ›

Steve Robey • a year ago

You just saved me so much time! I've been searching around the internet for a way to access the COS on this radio because I wanted to try and use it for my IRLP node

and had no luck. I actually found my way here through a Google image search! I'll be sharing this information with others who might wish to do the same.

• Reply • Share ›

Ido N Mod ➚ Steve Robey
• a year ago

I'm glad to hear!
I wish I had more chinese radios to check...
That was interesting process.

• Reply • Share ›

Olivier Schmitt • a year ago

Thank for this great reply!
I will try the version with PTT.
I give you some news when it be done
Dont forget to take this explication on your website.
This can be helpfull for other OM

• Reply • Share ›

Olivier Schmitt • a year ago

Hello, first thank you for this great article.
I juste whant to ask you if you would make an article about the fan mods.
I dont know where i can connect a fan on the board and maybe how can we made for start the fan in transmit state or with a temperature sensor or some think like this.

Thanks in advance :)

• Reply • Share ›

Ido N Mod ➚ Olivier Schmitt
• a year ago

Hi Olivier!
The QYT radio is currently in use for the Allstar node so I can't take it apart.

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