

Remote Rig



simple machines forum

2011-03-12, 13:29:05

Welcome, **Guest**. Please [login](#) or [register](#).
Did you miss your [activation email](#)?

 Forever

Login with username, password and session length

News:


[HOME](#) [HELP](#) [SEARCH](#) [LOGIN](#) [REGISTER](#)
[Remote Rig](#) > [RRC 1258 Support in English](#) > [General discussion forum](#) > [TS-480 RFI - more information](#)
[« previous](#) [next »](#)

Pages: 1 [2]

[PRINT](#)

Author

Topic: TS-480 RFI - more information (Read 728 times)

on4iq

Newbie



Posts: 18

**Re: TS-480 RFI - more information**« **Reply #15 on:** 2010-09-08, 18:51:28 »

OK, I have found a solution to my issues, I opened the kenwood handmike to check the connections.

In the connector where 2 blue wires, very confusing eh?

measured it and:

middle blue wire on pin 4 is the ground (micro gound) , had this one inversed with the other blue wire

Have 100watts rf free now.

Mike schematic for ts480sat is correct

1 up (blue)

2 N.C. (yellow)

3 micro (white)

4 mic gnd (blue, or should i say shielding of the cable)

5 PTT (grey)

6 PTT GND (green)

7 NC

8 DWN (red)

I have following menu setting:

1. Select DSP Transmission Equalizer (Menu 19) = Hb2.

2. Select Transmitter Filter Bandwidth (Menu 20) = 2.4 KHz.

3. Microphone Mic = 70.

4. Select Processor = ON. Processor input = 65, Processor output = 45



Logged

sm2oAdministrator
Sr. Member

Posts: 365

**Re: TS-480 RFI - more information**« **Reply #16 on:** 2010-09-09, 07:24:55 »

Hi see answers below



1) What is the spec of the jumper wires. I want to redo the jumpers just in case there is a bad connection. The wires bend very easily and are difficult to re-use once they are bent?

EKUX red 0,28mm² diam 0,6 mm

2) Would doing the mic gain mod help overcome the problems we are having?

No it has nothing do to with RFI, but the settings has to match, to get the right levels.

Have you tried to increase the LF-levels trough the system so you can reduce the mic gain on the radio, probably it get less sensitive to RF with lower mic gain ?

3) Would it help to put the RRC in a screened box?

No my experience is that this is an error in the TS-480 which causes this problem. The engineer must have had a bad day when developing the TS-480 mic amplifier. The problems are caused by ground problems. Im not aware of any of these problem with any other rig, even Kenwood rigs. If you have RS-232 ports connected to the RRC, test to remove them, ground loops via the RS-232 eq. get things worse also.

4) Would it help to put a 1:1 decoupling transformer in the mic connection between the RRC and Rig?

No,there is already a 1:1 transformer in the RRC (see pdf.manual). I think issolating the other signals would be more effective but it's not that easy of course

5) There are a number of errors and inconsistencies in the Kenwood documentation for the RJ45 mic connector

a) pin numbering is non-conventional

b) the mic ground and system ground pins are swapped round in the User Manual

Can you confirm that the wiring schematic for the RJ45 lead from RRC to Rig, and the jumper wiring diagrams are correct bearing in mind these errors.

As far as I know my drawings are correct, I understand from this forum other people has verified it also.

73,
Mike

 Logged

G3UEG



Re: TS-480 RFI - more information

Jr. Member



Posts: 30

« **Reply #17 on:** 2010-09-09, 10:23:30 »

Hi Mike,



Thank you for the clear answers.

I will have one more attempt to get it working before I give up..

I think I shall strip everything down and start again. Of the things you have mentioned, I shall

- 1) Renew the jumpers carefully
- 2) Remove the SPE amp connections inc the RS232
- 3) Increase the mic levels through the system and reduce the mic gain.
- 4) try placing everything on a large flat aluminium earth plate.

Finally can anyone confirm whether there is anything at the control end that can be done to mitigate the problems (other than adjusting the gains as suggested above)

Can anyone explain why if it is a problem with the TS-480, why the problem does not show (even at max power with amp) when using the standard hand mic or a Heil headset direct into the rig when operating it locally??

73,
Dave, G3UEG

Logged

sm2oAdministrator
Sr. Member

Posts: 365

**Re: TS-480 RFI - more information**« **Reply #18 on:** 2010-09-09, 11:55:26 »

Hi



Nothing can be done at control end besides adjusting gain

When using the original mic you have it totally isolated by the plastic housing that's why it doesn't show any problem.

I will try to spend some time to make an isolation board where all signals including the RS-232 ports are isolated

but I can't say when it's finished.

73 de mike

Logged

sm2oAdministrator
Sr. Member

Posts: 365

**TS-480 RFI - problem. The reason are found**« **Reply #19 on:** 2010-09-15, 07:40:22 »



After Daves G3UEG continued mails about this Issue (thank you) I decide to investigate this deeper, and we have now found the reason why some people using TS-480 have problems with RFI and other not.

There are two different configurations of the Mic connector in the TS-480. At some point of the production they have swapped Mic-gnd and Chassi-gnd. There are no known way to find out when they have changed from serial number etc. I don't even now which one is the new one or if it is different between HX and SAT, but I guess that "Connection type 1" is in new radios.

If you have problem with RFI at your TS-480 setup try to change the strapping (check at the website).

If you want to go deeper...

The simplest way is to measure with and ohm meter before doing the strapping. Do not connect anything to power. Open the Radio-RRR, remove the red straps, connect the supplied patch cable between the Radio-RRR and the Mic-Input of the radio. Measure with and good ohm meter between the point marked 6 at the strapping area and a chassi screew on the TS-480. If you get less than 1 ohm you have connection type 1. From the pin marked 4 you should have about 3 ohm to chassi. If you get the opposit values you have connection type 2. After you have decide which connection type you have you can do the strapping according to the pictures on the website.

A comment from Kenwood would of course be interesting...

info on website <http://www.remoterig.com/en/ts480anp.htm>

73 de mike

 Logged

sm2o

Administrator
Sr. Member



Posts: 365



Re: TS-480 RFI - more information

« **Reply #20 on:** 2010-09-15, 19:04:39 »

Dave got it confirmed today, from someone near Kenwood

Quoting his email



"

– I've checked this and can confirm that the mic socket should be wired as pin 3 = common ground and pin 5 = mic ground. This matches our other RJ-45 mic sockets in the VHF/UHF mobiles TM-D710E etc., and is shown in the Instruction Manual.

But....in earlier production TS-480SAT/HX models from serial number 70599999 or below, the connection "MCG" (Common GND) was physically wired to pin 5 and "MSG" (MIC GND) was wired to pin 3 in the mic socket. This was shown in the Service Manual.

From serial number 70600056 onwards, the pattern of the PCB was corrected at the factory and the normal microphone connections reinstated.

Unfortunately our colleagues in the Head Office dept that write the Manuals haven't yet produced an amended version of the Service Manual and it still shows the "wrong" wiring (i.e. the incorrectly laid-out wiring that was actually in the earlier radios) as opposed to the corrected production version with the "right" wiring as per current radios.

This could cause some confusion to owners as later radios will not match the earlier Service Manual – in this case radios after 70600056 are correct and the Service Manual is wrong. The Instruction Manual has always shown what should be the correct pin-outs."

I'll take this up with our contacts here to pass back to Japan as the Service Manual needs updating.

/mike

 Logged

sv1elf

Newbie



Posts: 3



Re: TS-480 RFI - more information

« **Reply #21 on:** 2010-09-16, 13:34:32 »

Try to change the power supply from the receive side , change it with a switch mode .

Use to have the same problem until change the power supply

 Logged

LA7THA

Newbie



Posts: 12



Re: TS-480 RFI - more information

« **Reply #22 on:** 2010-10-07, 11:12:41 »

Did the change on my cable GND/GNDE and all Problem now gone, no bad modulation and also i can use PROC in the radio and modulation is Good:-)

 Logged

Pages: 1 [2]

PRINT

« previous next »

Jump to: => General discussion forum





Powered by SMF 1.1.13 | SMF © 2006-2011, Simple Machines LLC

