FTDX101D & FTDX101MP

IMPROVE MAIN RX or SUB RX RECEPTION

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If you are using MAIN receiver, make sure you change the antenna Input to something different on SUB receiver…

You will surely have already noticed this "condition" if you want to have the FTDX101 MAIN and SUB receivers connected to the same antenna.
Hot water was not discovered here, but many don't know it!
The FTDX101 is also part of this category since it has dual receivers with MAIN and SUB receiver, which rightly uses an internal antenna splitter to be able to receive on the MAIN RX and SUB RX simultaneously.
There are 3+3 selectable antennas and this can help us improve something FTDX101 MAIN or SUB RX.

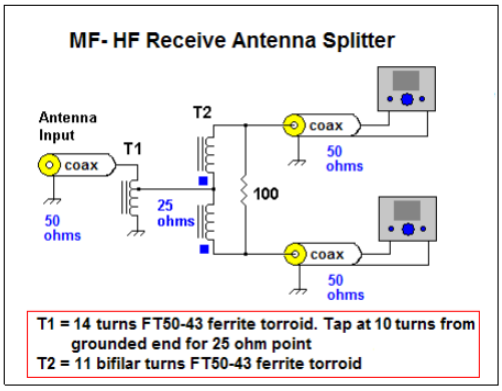
The same worsening problem occurs when selecting another dual receiver operating parallel to the same antenna. Like the RX MAIN and RX SUB of the FTDX101.
The problem is numbered with -3/6db and being able to alleviate it you will therefore have an improvement of +3/6db from normal conditions of use a single receiver single antenna.

Not really an "improvement" but a "restore" to normal and better reception losses free...

How to do?

Simply verifiable on a stable local generated signal or stable RX signal. The problem occurs on many (all) transceivers with double receivers as the antenna must necessarily be bolted and divided between the two receivers A and B which work simultaneously even if it is off connected to the same antenna, as on the FTDX101!

Here are some info for those wishing to try their hand at building some ANTENNA SWITCH:



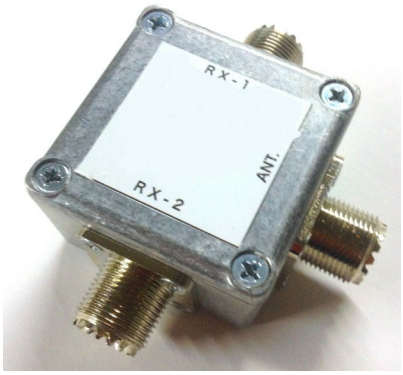


Fig.1 Exemple for classic extern RX antenna splitter with ~3/6db insertion loss

Something similar is internal to the FTDX101 and all dual receivers.
The great thing about the FTDX101 is that it can be bypassed.

<u>You should look in the "FTDX101 service manual" to check how the splitter circuit is made and calculate the losses.</u>

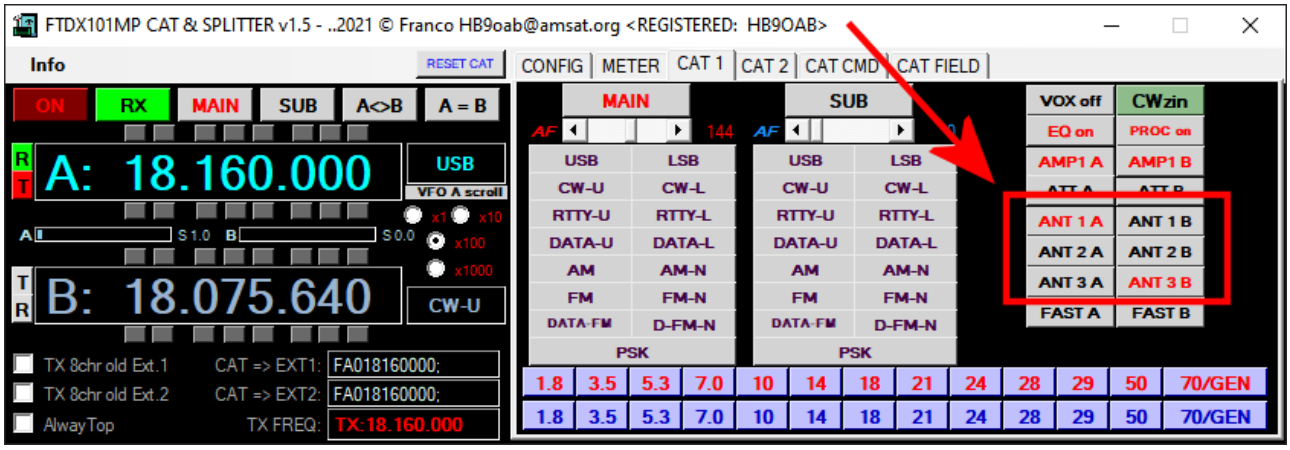
Here are some tests with a locally generated signal and you also notice the background NOISE that changes, by switching one of the two receivers to a different antenna and also your Smeter you will notice that it thinks much better:

If difference imperceptible with well-understood signals, those that received S1 or just barely understandable, will have a substantial difference so much as to UNDERSTAND or NOT UNDERSTAND a weak signal on the noise.

It is not a real problem or bug but a limitation of all the double receiver with the same antenna.
The beauty of the FTDX101 is that with different antennas, it eliminates this loss that perhaps other "dual receivers" may not do!
So if you want to hear signs that, like here, almost all DX are due to the local geographic conformation, here is that by moving the RX A MAIN and B SUB on a different MAIN/SUB antenna, you will simply improve the sensitivity of 3-6db of the receiver in use, then about +/- ~S0.5/1 point!
Almost imperceptible but still a loss that can be heard on limit signals and background noise. On the FTDX101 also the Smeter is more effective and precise on weak signals.
Go ahead, simple just switch antennas with Low Signal.

I use my little software that I made FTDX101 CAT & SPLITTER which easily switches the FTDX101 3+3 RX MAIN and RX SUB antennas quickly.

FTDX101 CAT & SPLITTER => CAT 1 WINDOW PRINT SCREEN
with whom I click faster to select ANT1-ANT2-ANT3 on MAIN A or SUB B:



With my simple CAT application, easily and quickly, you can directly switch the antennas of the FTDX101 and check the above.

NOTE: So using the RX VFO MAIN and RX VFO SUB for CW/SSB/RTTY DXpedition as “hound” and with low signals and that use SPLIT (UP), it is better to use the TXCLAR on the MAIN than the VFO B.
Unfortunately, the CLAR limit is a UP 5-10kHz as a maximum but if the signal is really very low at the noise level, you can listen or not listen to it if the RX SUB uses the same antenna.
Evidently ONLY ON LOW or VERY VERY LOW SIGNALS, this makes the second RX and VFO SUB useless because it is better to tune an antenna different from the RX MAIN.

Obviously on strong signals there are no audio or udible differences, but in signal strength, in the Smeter or on signal in the noise, this is always better!
On the contrary, it could also be a solution to slightly decrease the sensitivity and have less background noise ... ;-)

Good DX!

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