MMDVM module with describing the frequency offsets

The MMDVM hotspots, which affect the communication effect, mainly have two parameters, Packet Loss and Bit Error Rate.The following figure.

Gateway Activity

时间 (HKT)	模式	呼号	目标	源	时长(s)	丢失	误码率
11:15:20 Dec 23rd	DMR Slot 2	BG4IGX	TG 46001	Net	TX		
11:15:09 Dec 23rd	DMR Slot 2	46001	TG 46001	Net	9.1	1%	0.0%
11:12:18 Dec 23rd	DMR Slot 2	BG4IAK	TG 46001	Net	0.5	0%	0.0%
11:11:27 Dec 23rd	DMR Slot 2	ZR6DRP	TG 46001	Net	0.5	0%	0.0%
11:11:22 Dec 23rd	DMR Slot 2	BH4OFM	TG 46001	Net	1.3	9%	0.0%
11:04:18 Dec 23rd	DMR Slot 2	BI4VNM	TG 46001	Net	0.1	0%	0.0%
11:02:50 Dec 23rd	DMR Slot 2	BG4RIE	TG 46001, 1 blocks	Net	0.1	0%	0.0%
11:02:49 Dec 23rd	DMR Slot 2	4604152	TG 46001	Net	0.4	0%	0.3%
11:02:32 Dec 23rd	DMR Slot 2	BH3DHE	TG 46001	RF	8.3	0%	0.8%
11:02:17 Dec 23rd	DMR Slot 2	BG2CLX	TG 46001	Net	11.6	3%	0.0%
10:58:36 Dec 23rd	DMR Slot 2	4602118	TG 46001	Net	7.6	0%	0.0%
10:49:04 Dec 23rd	P25	10999	TG 10402	Net	2.3	0%	
10:49:02 Dec 23rd	P25	BH3DHE	TG 10402	RF	0.7	0%	0.1%

Local RF Activity

时间 (HKT)	模式	呼号	目标	源	时长(s)	误码率
11:02:32 Dec 23rd	DMR Slot 2	BH3DHE	TG 46001	RF	8.3	0.8%
10:49:02 Dec 23rd	P25	BH3DHE	TG 10402	RF	0.7	0.1%

The bit error rate is the response to the data transmitted between the MMDVM hot plate and digital devices (Radio-tone, etc.), and is related to the following factors: frequency accuracy of the hot plate, distance between the hot plate and the device, and occlusion.

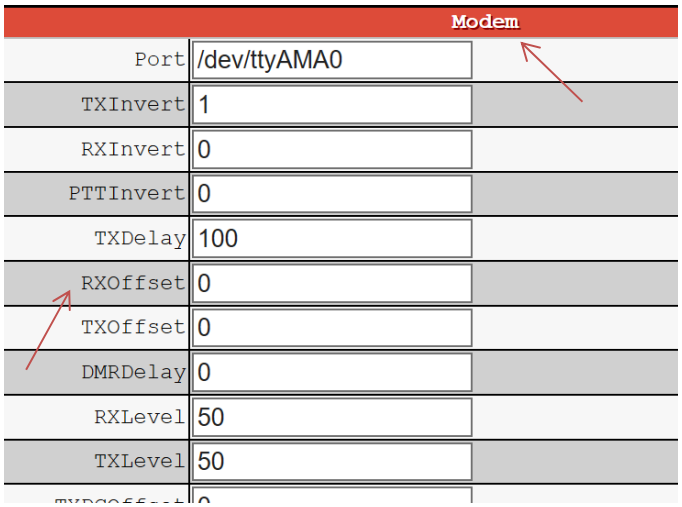
The bit error rate is below 1% and will not affect the communication effect. The bit error rate increases and the communication effect deteriorates. If it is above 5%, it will be more obvious that the sound is frustrating.It may even result in no signal being sent or received. In this case, excluding the influence of other factors, Adjusting the RXOffset can improve the communication effect.

Adjusting the RXOffset step

1、Turn on the power and connect enternet.

2、Browse the website http://pi-star/admin/expert/edit_mmdvmhost.php

3、Modify the RXOffset parameter in the Modem area



3、 Adjust by multiples of 100 (for example: 100,200,300), Click Apply Changes
Wait for the restart, press PTT to observe the change of bit error rate.

4、 If no effect, please adjust with -100 multiples, (for example:-100,-200,-300)

5、 If no effect, please adjust with 25 multiples, (for example:25,50,75)

6、 If no effect, please adjust with -25 multiples, (for example:-25,-50,-75)

7、 Bit error rate adjusted to 1%.