自由通D868UV修改发射功率教程

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1. 为什么要修改发射功率？

这只对讲机的默认发射功率是1、2、5、7，最小档的发射功率对于MMDVM来说太大了。并且各档功率之间的差别（db）太小了。

1. 怎样修改

简单说，通过刷机调出完整的高级菜单，然后打开高级测试菜单调整

第一步，使用自由通自带的写频工具刷\868test\fulltestmode这个文件。关键状态下按住PTT和下面一个侧键然后开机，进入图标更新模式，然后选择刷机功能，选择文件刷就行。不顾有个问题，这时候你的手台只有英文。

1. 安装宝峰DMR 6X2的写频软件，刷修改过的宝峰固件，就是868tobf目录里的。进入刷机的方法是按住PTT和顶部红色按钮开机，然后刷机。
2. 用自由通的写频软件刷回正常的自由通2.33版固件，进入刷机的方法是按住PTT和顶部红色按钮开机，然后刷机。这时候，你可以开机了，然后在设置里面第11项把语言改回中文。
3. 怎样进入高级菜单

按住PTT和数字键1，开机就行，你就会看到很多信道给你选择。上下键选择信道（就是要调整的项目），旋钮调整数值。警告：不懂别乱调。

这是每个项目的含义（英文原文）

|  |  |  |  |
| --- | --- | --- | --- |
| CH | Setting | Adjustment range | Description |
| 1 | nil | nil | nil |
| 2 | nil | nil | nil |
| 3 | nil | nil | nil |
| 4 | nil | nil | nil |
| 5 | nil | nil | nil |
| 6 | nil | nil | nil |
| 7 | FQCU | 0-65535 | Frequency fine tune |
| 8 | PAHU | 0-255 | UHF RF power output turbo setting |
| 9 | PAMU | 0-255 | UHF RF power output high setting |
| 10 | PALU | 0-255 | UHF RF power output medium setting |
| 11 | PASU | 0-255 | UHF RF power output low setting |
| 12 | MODU | 0-255 | Overall deviation setting for both UHF & VHF (value copied to 39 below) |
| 13 | TONEU | nil | Push PTT to transmit a test 1000 Hz tone on a UHF FM frequency |
| 14 | CTCW | 0-63 | Deviation setting for CTCSS in both UHF & VHF (value copied to 41 below) |
| 15 | DCSW | 0-63 | Deviation setting for DCS in both UHF & VHF (value copied to 42 below) |
| 16 | RXVLU | 0-4095 | UHF receive tracking gain, low end of band |
| 17 | RXVMU | 0-4095 | UHF receive tracking gain, mid band |
| 18 | RXVHU | 0-4095 | UHF receive tracking gain, top end of band |
| 19 | SQTHU | 60-134 | UHF squelch tight threshold |
| 20 | RSSIU | nil | UHF RSSI, inject RF at desired level for 1 bar reading, rotate top dial to sample and lock in value |
| 21 | A OBHU | 0-65535 | not yet known, but seems to adjust screen brightness (suspect this is a bug) |
| 22 | A OBLU | 0-65535 | not yet known |
| 23 | D OBHU | 0-65535 | not yet known, unable to adjust from test menu |
| 24 | D OBLU | 0-65535 | not yet known, unable to adjust from test menu |
| 25 | D CTCW | 0-65535 | not yet known |
| 26 | D DCSW | 0-65535 | not yet known |
| 27 | DIGIU FSKL | nil | Push PTT to send test FSK signal (heard as 2400 Hz) at low end of UHF band |
| 28 | DIGIU FSKM | nil | Push PTT to send test FSK signal (heard as 2400 Hz) at mid UHF band |
| 29 | DIGIU FSKH | nil | Push PTT to send test FSK signal (heard as 2400 Hz) at high end of UHF band |
| 30 | DIGIU 600Hz | nil | Push PTT to send test 600Hz signal UHF band (heard on FM as 200 & 400 Hz?) |
| 31 | DIGIU 300Hz | nil | Push PTT to send test 300Hz signal UHF band (heard on FM as 800 Hz?) |
| 32 | DIGIU 1031 | nil | Push PTT to send test signal UHF band, heard on DMR as 1031 Hz |
| 33 | DIGIU BER | nil | Display received BER of DMR test signal |
| 34 | DIGIU TEST | nil | Test UHF DMR for both TX & RX as if it were on a regular DMR channel |
| 35 | PAHV | 0-255 | VHF RF power output turbo setting |
| 36 | PAMV | 0-255 | VHF RF power output high setting |
| 37 | PALV | 0-255 | VHF RF power output medium setting |
| 38 | PASV | 0-255 | VHF RF power output low setting |
| 39 | MODV | 0-255 | Overall deviation setting for both VHF & UHF (value copied to 12 above) |
| 40 | TONEV | nil | Push PTT to transmit a test 1000 Hz tone on a VHF FM frequency |
| 41 | CTCWV | 0-63 | Deviation setting for CTCSS in both UHF & VHF (value copied to 14 above) |
| 42 | DCSWV | 0-63 | Deviation setting for DCS in both UHF & VHF (value copied to 15 above) |
| 43 | RXVLV | 0-4095 | VHF receive tracking gain, low end of band |
| 44 | RXVMV | 0-4095 | VHF receive tracking gain, mid band |
| 45 | RXVHV | 0-4095 | VHF receive tracking gain, top end of band |
| 46 | SQTHV | 60-134 | VHF squelch tight threshold |
| 47 | RSSIV | nil | VHF RSSI, inject RF at desired level for 1 bar reading, rotate top dial to sample and lock in value |
| 48 | A OBHV | 0-65535 | not yet known |
| 49 | A OBLV | 0-65535 | not yet known |
| 50 | D OBHV | 0-65535 | not yet known |
| 51 | D OBLV | 0-65535 | not yet known |
| 52 | DIGIV FSKL | nil | Push PTT to send test FSK signal (heard as 2400 Hz) at low end of VHF band |
| 53 | DIGIV FSKM | nil | Push PTT to send test FSK signal (heard as 2400 Hz) at mid VHF band |
| 54 | DIGIV FSKH | nil | Push PTT to send test FSK signal (heard as 2400 Hz) at high end of VHF band |
| 55 | DIGIV 600Hz | nil | Push PTT to send test 600Hz signal VHF band (heard on FM as 200 & 400 Hz?) |
| 56 | DIGIV 300Hz | nil | Push PTT to send test 300Hz signal VHF band (heard on FM as 800 Hz?) |
| 57 | DIGIV 1031 | nil | Push PTT to send test signal VHF band, heard on DMR as 1031 Hz |
| 58 | DIGIV BER | nil | Display received BER of DMR test signal |
| 59 | DIGIV TEST | nil | Test VHF DMR for both TX & RX as if it were on a regular DMR channel |
| 60 | VBAT | 0-200 | Calibrate displayed voltage of battery |
| 61 | MODE | 0-12 | Changes operational frequency bands of radio |
| 62 | 087.50M | nil | Receiver test of FM broadcast band |
| 63 | 097.50M | nil | Receiver test of FM broadcast band |
| 64 | 108.00M | nil | Receiver test of FM broadcast band |

改各档功率的话，我们只需要这些：

|  |  |
| --- | --- |
| 编号 | 意义 |
| 8 | U段T档功率 |
| 9 | U段H档功率 |
| 10 | U段M档功率 |
| 11 | U段L档功率 |
| 35 | v段T档功率 |
| 36 | v段H档功率 |
| 37 | v段M档功率 |
| 38 | v段L档功率 |

各档的数值只是参考意义，数值越大功率越大，但没有线性关系。另外，T档就算增加数值也无法增加功率。目前我使用这样的参数

V段 0.4/1.4/5/7 U段 0.3/1.2/4/6 相邻两档中间差4倍6db，1格S表

以上数值为原装天线，功率表实测。如果换不同的天线，功率可能变化，到时候不满意随时调整。要注意，进入测试模式时候，调整数值的同时也能发射，但此时发射功率和退出后正确的发射功率有差别。所以调整好之后，必须退出了到正常模式实测才行。