

Repeater V3F4 Firmware Upgrade User's Manual #FM Analog#MMDVM v2020-01-02

This guide just for the Products made by BI7JTA, Synchronous update www.youtube.com/winters_huang , www.bi7jta.org

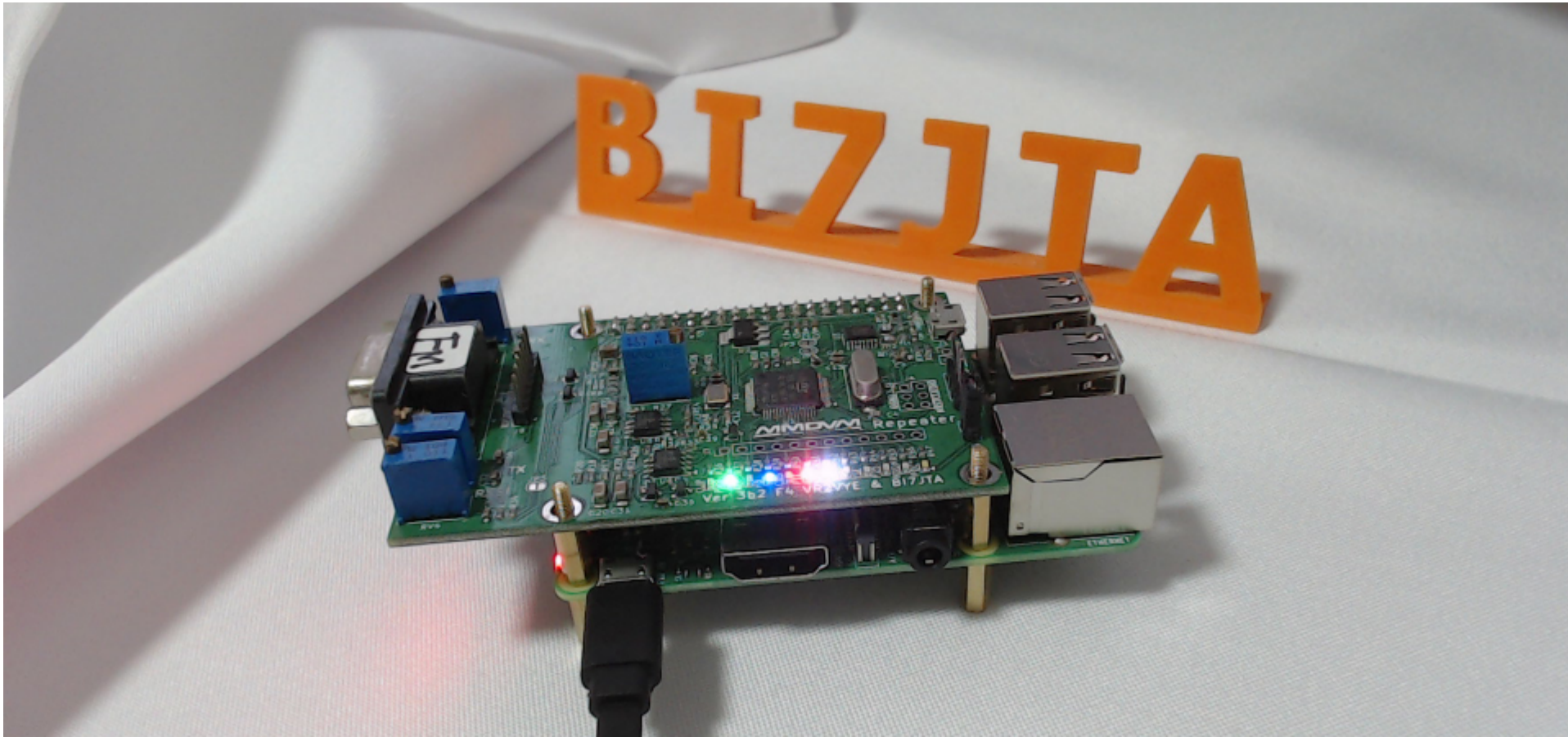
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Prepare:

Hardware

MMDVM repeater board V3F4, provide by @BI7JTA



Software

Upgrade Pi-Star version to V4.1.2+ **build 20201205** or new

Pi-Star:4.1.2 / **Dashboard: 20201205**

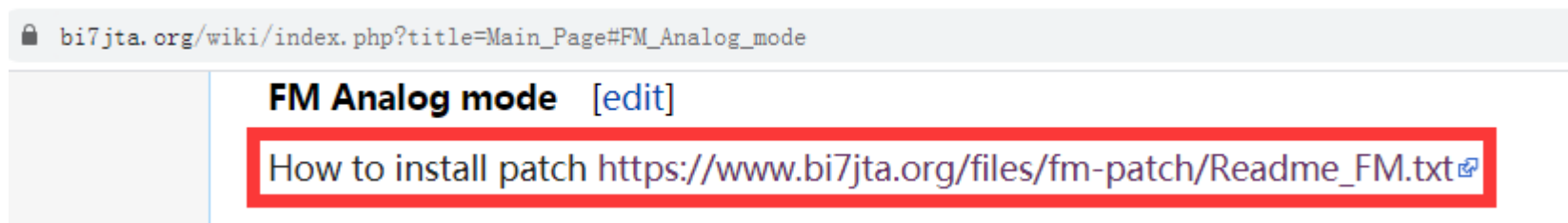
Pi-Star Digital Voice - Configuration

Dashboard | Admin | Expert | Power | **Update** | Backup/Restore | Factory Reset

Gateway Hardware Information				
Hostname	Kernel	Platform	CPU Load	CPU Temp
pi-star	4.19.97-v7+	Pi 3 Model B (1GB) - Embest, CH	0.37 / 0.32 / 0.19	42.9° C / 109.2° F

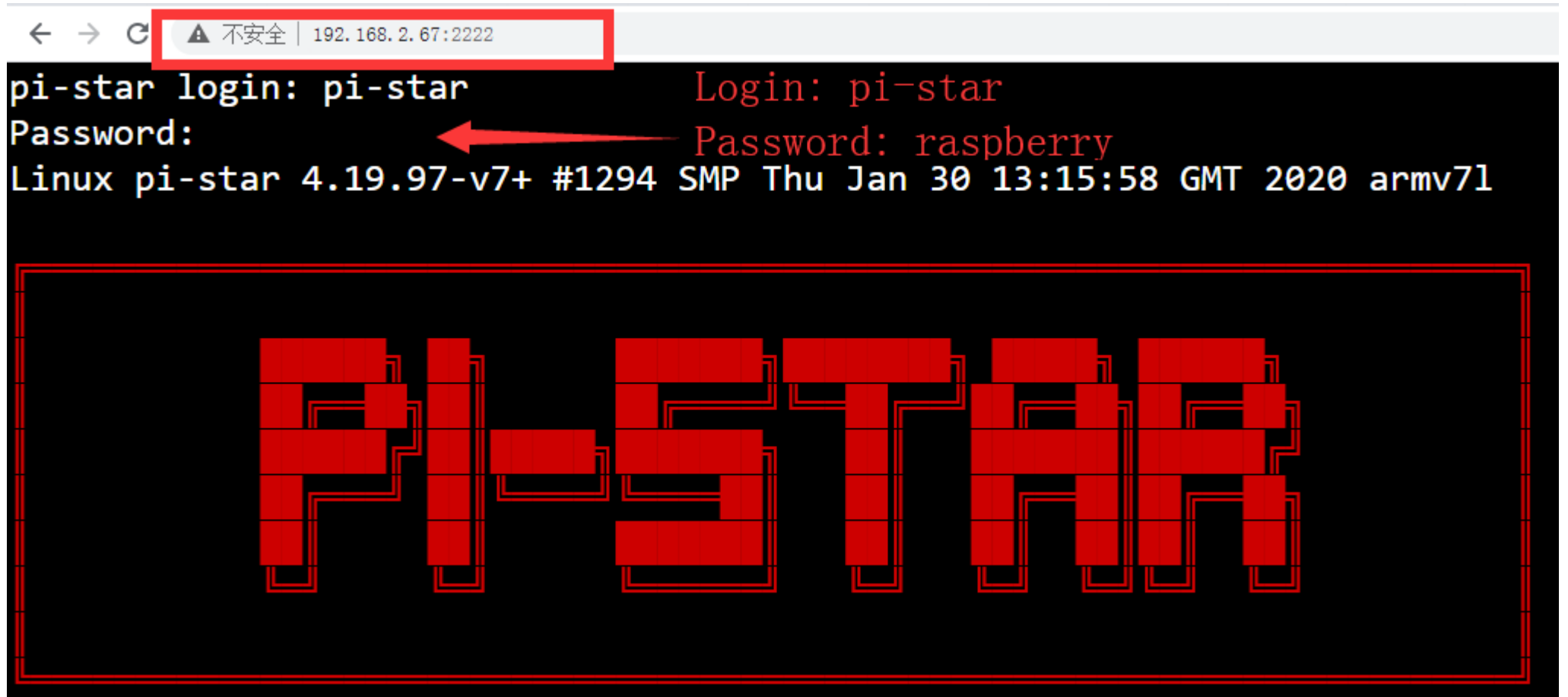
Step_1 Find the Upgrade Script

Open your web browser , visit <https://www.bi7jta.org/wiki>



Step_2 Enter SSH mode

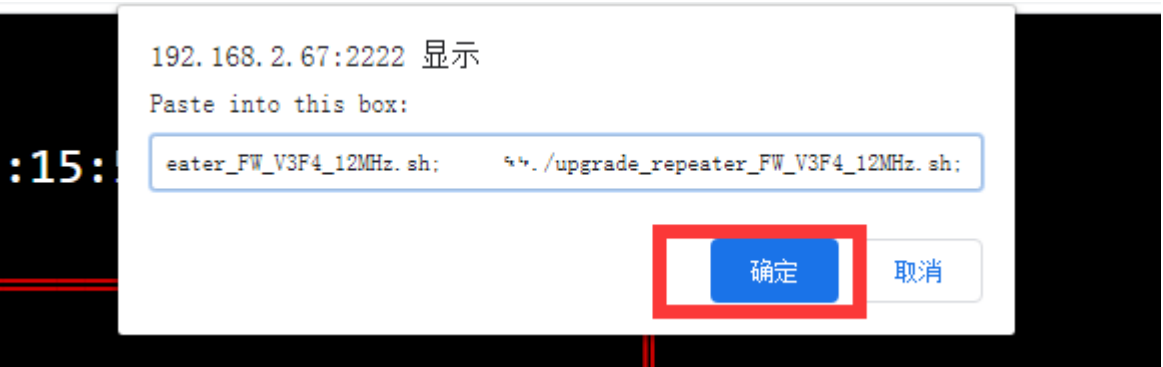
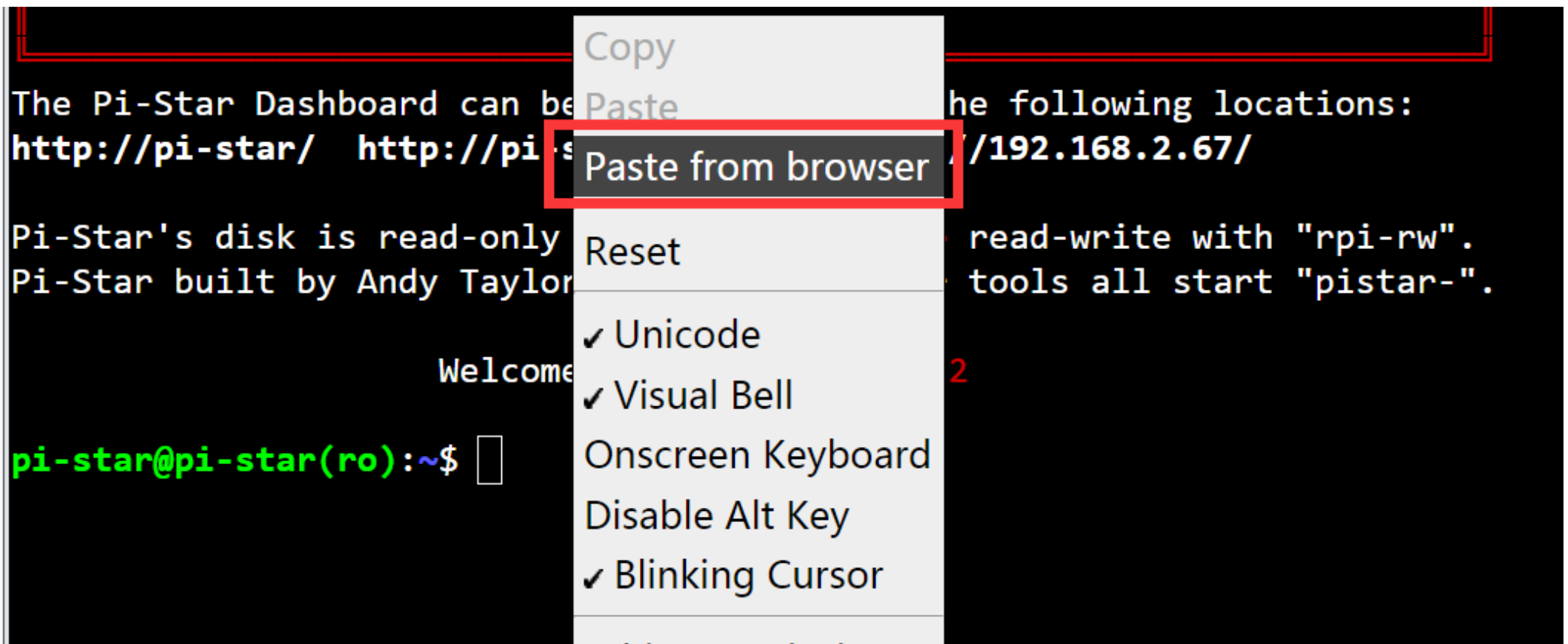
http://your_true_ip_address:2222/ or <http://pi-star:2222/>



Step_3 Run the script

Copy and Paste the follow commands to SSH dialog, then press ENTER to run.

```
rpi-rw;  
curl -OL https://www.bi7jta.org/files/fm-patch/firmware/upgrade_repeater_FW_V3F4_12MHz.sh;  
chmod +x upgrade_repeater_FW_V3F4_12MHz.sh;  
./upgrade_repeater_FW_V3F4_12MHz.sh;
```



```
pi-star@pi-star(ro):~$ rpi-rw;
pi-star@pi-star(rw):~$
pi-star@pi-star(rw):~$ curl -OL https://www.bi7jta.org/files/fm-patch/firmware/upgrade_repeater_FW_V3F4_12MHz.sh;
% Total    % Received % Xferd  Average Speed   Time    Time     Time  Current
           Dload  Upload   Total   Spent    Left  Speed
100  622  100  622    0     0   438      0  0:00:01  0:00:01 --:--:--  438
pi-star@pi-star(rw):~$
pi-star@pi-star(rw):~$ chmod +x upgrade_repeater_FW_V3F4_12MHz.sh;
pi-star@pi-star(rw):~$
pi-star@pi-star(rw):~$ ./upgrade_repeater_FW_V3F4_12MHz.sh;
```

Step_4 Check upgrade result

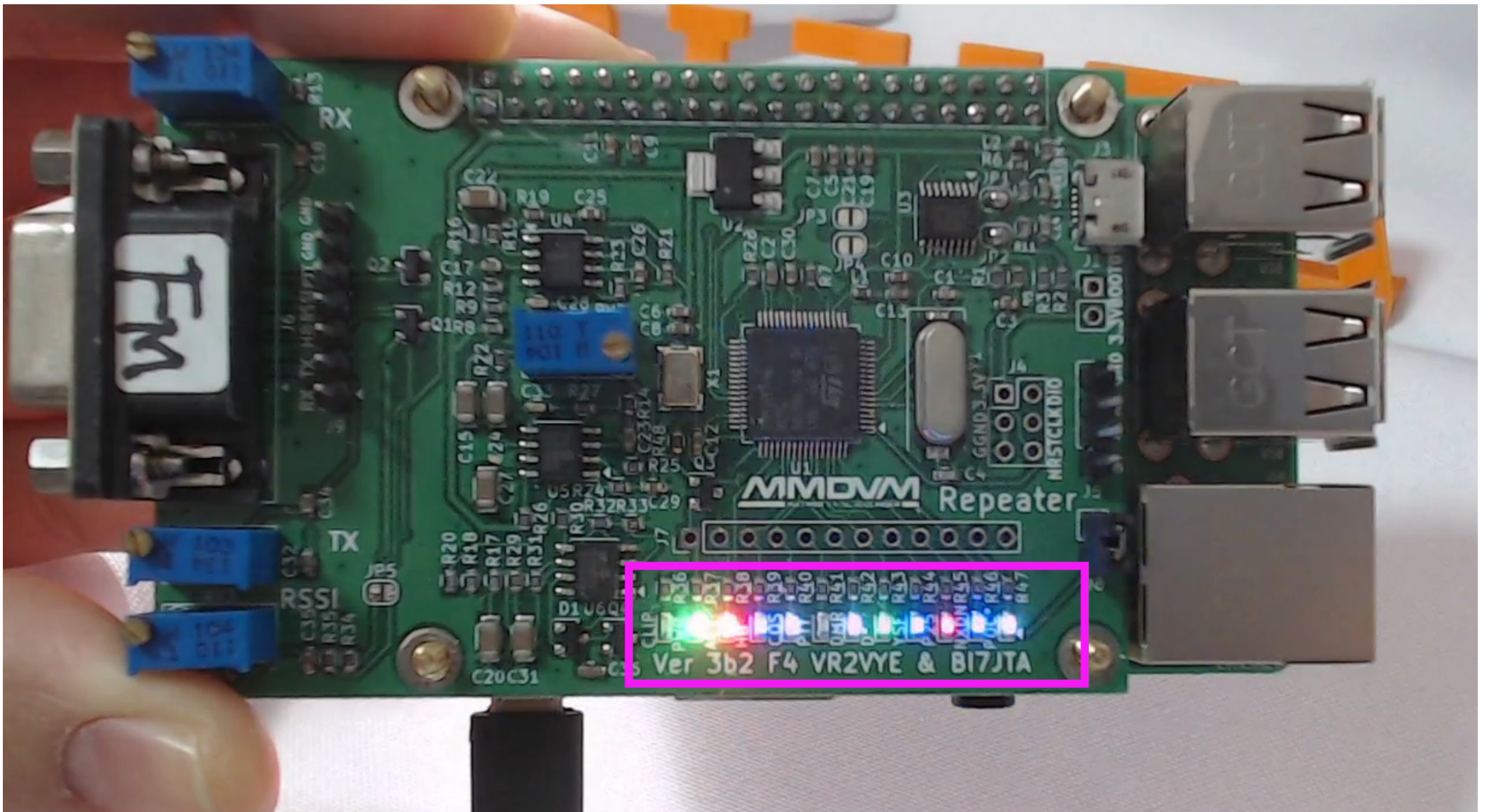
```
Using Parser : Intel HEX
Interface serial_posix: 57600 8E1
Version      : 0x31
Option 1     : 0x00
Option 2     : 0x00
Device ID    : 0x0421 (STM32F446xx)
- RAM        : 128KiB (12288b reserved by bootloader)
- Flash      : 512KiB (size first sector: 1x16384)
- Option RAM : 16b
- System RAM : 30KiB
Write to memory
Erasing memory
Wrote and verified address 0x080471c4 (100.00%) Done.

Resetting device... done.

+ echo ' If not 100% successful, run again ./v3f4_12MHz_flash.sh '
  If not 100% successful, run again ./v3f4_12MHz_flash.sh
```

Step_5 Power Off and Power On.

All Status-LED flash ,means flash success, if not , try again.

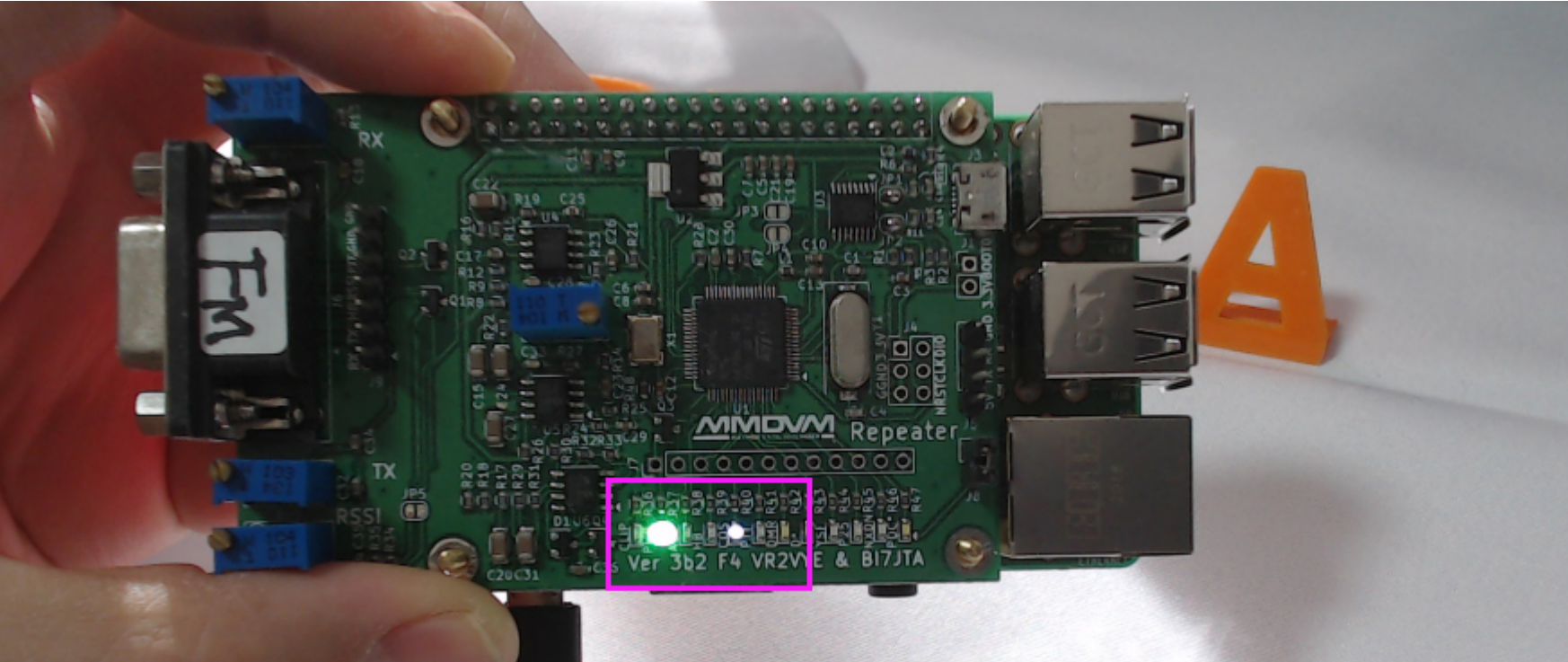


Troubleshooting

1, Download error, run script again.

```
pi-star@pi-star(rw):~$ ./upgrade_repeater_FW_V3F4_12MHz.sh;
+ sudo mount -o remount,rw /
+ cd /home/pi-star
+ curl -OL https://www.bi7jta.org/files/fm-patch/firmware/mmdvm_f4.hex
  % Total    % Received % Xferd  Average Speed   Time    Time     Time  Current
                                 Dload  Upload   Total   Spent    Left   Speed
 25  800k    25  207k    0     0   608      0  0:22:27  0:05:49  0:16:38    0
curl: (56) OpenSSL SSL_read: SSL_ERROR_SYSCALL, errno 104 Download error
+ curl -OL https://www.bi7jta.org/files/fm-patch/firmware/stm32flashV5
  % Total    % Received % Xferd  Average Speed   Time    Time     Time  Current
                                 Dload  Upload   Total   Spent    Left   Speed
 0     0     0     0     0     0     0     0  --:--:--  0:00:28  --:--:--    0
```

2. LED status not normal after power off and on, upgrade again.



Reference

<https://github.com/g4klx/MMDVM>

Extension

FM Analog mode in MMDVM Repeater User's Manual

More support

- Video demo:
- www.youtube.com/winters_huang
- Facebook group:
- www.facebook.com/groups/v3f446
- Store/Wiki:
- www.bi7jta.org
- EMail:
- bi7jta@gmail.com