

## Guide to eliminating AMD 6800 variability in Hive.

This guide should remove the seeming randomness in hashrate after every reboot in hive. Using this guide should lock you at 62+MH even after reboots, shutdowns, etc. After the mod you may also be able to undervolt your cards harder while still maintaining higher hashrates.

This is a soft mod similar to MPT. It does **not** permanently alter your card. You can always just delete the script. *Worst* case hive-replace will also work.

Original source: <https://forum.hiveos.farm/t/rx6800-efficient-overclocking/26448/330>

### Notes:

This assumes you are using 1065 memory - You can go higher!  
When you see > that means copy+paste this and hit enter.

// Red text is commentary

### Step 1: Install upp

// Open shellinabox and execute the following one at a time:

```
> cd /  
> sudo apt-get install libgtk-3-dev build-essential python3 python3-pip  
> pip3 install upp  
> cd /opt  
> mkdir script_upp  
> cd script_upp  
> nano script.upp.sh
```

### Step 2: Write the script

// A text editor should be open. Go to the webpage linked below and copy and paste the text into the editor with right-click -> paste from browser

<https://pastebin.com/raw/bPfmymhd>

Now hit CTRL-X, Y, then enter.

// This should close and save the file

### Step 3: Test the script

*// Now that we have created the script we need to run it to confirm that it works*

```
> chmod +x script.upp.sh
```

```
> bash script.upp.sh
```

*// If you get the message below, go to step 5. (You should see this message for each 6800)*

```
Changing smc_pptable.FreqTableFclk.0 from 1550 to 1550 at 0x5d6  
Committing changes to '/sys/class/drm/card2/device/pp_table'.
```

*// If you get an “Errno 2” as seen below, double check steps 1 and 2*

```
FileNotFoundError: [Errno 2] No such file or directory: '/sys/class/drm/card1/device/pp_table'
```

*//If you get the following error, remove the / at the end of every line of code in step 2*

```
script.upp.sh: line 16: syntax error near unexpected token `fidone'  
script.upp.sh: line 16: `done'
```

*// If you still get errors after going through all the steps again, you can try manually specifying your 6800s as described here: [Manual guide to eliminating AMD 6800 variability in Hive](#)*

### Step 4: Add the script we just made to work at startup.

```
> nano /hive/bin/hive
```

*// This will open up a funky looking text file.*

*// You are looking for “#Apply OC before miner start”*

*// You will need to add the below 2 lines after “if [[ \$GPU\_COUNT\_AMD -gt 0 ]];”*

*// If the code formatting starts to look messed up, try resizing your browser window*

*(press tab twice)* echo2 "> Applying F state clk"

*(press tab twice)* bash /opt/script\_upp/script.upp.sh

// It should look like this when you are done:

```
# Apply OC before miner start
if [[ $MAINTENANCE != 2 ]]; then
    if [[ $GPU_COUNT_NVIDIA -gt 0 ]]; then
        echo2 "> Applying Nvidia OC"
        nvidia-oc | sed 's/\x1b\[0-9;*m//g' # remove colors from syslog
    fi
    if [[ $GPU_COUNT_AMD -gt 0 ]]; then
        echo2 ">Applying F state clk"
        bash /opt/script_upp/script.upp.sh
        echo2 "> Applying AMD OC"
        amd-oc | sed 's/\x1b\[0-9;*m//g' # remove colors from syslog
    fi
fi
```

Press CTRL-X, Y, Enter.

## Step 5: Reboot & verify!

// After you reboot go back to shellinabox and type

> amd-info

// If it worked the FCLK will now be 1551 as seen here:

```
=== GPU 3, 3c:00.0 Radeon RX 6800 16368 MB ===
Bios: 113-D4120900-101
Core: 1350 MHz 668mV, Mem: 1064 MHz
PerfCtrl: manual, Load: 99%, MemLoad: 100%, Power: 115.0 W, Cap: 203 W
Core: 49°C, HotSpot: 55°C, Mem: 58°C, Fan: 68%, RPM: 2277
Core state: 1, clocks: 500 1350*
Mem state: 3, clocks: 96 456 673 1064*
SOC state: 0, clocks: 800* 960
DCEF state: 0, clocks: 417* 1200
F state: 0, clocks: 1551* 1551
```

// So far we have not seen much benefit in using this on other RX 6000 cards, but if you want to try it, see the manual guide linked in step 3. You can set the Fclk to 1550, or check amd-info and set it 1 below the maximum speed listed there.

Backup of script from step 2 in case PasteBin goes down:

```
#!/usr/bin/env bash

x=0

for (( c=0; c<$(gpu-detect listjson | jq 'length'); c++ ))\
do i=$c;\
  if [ "$(gpu-detect listjson | jq '.[\'$i\' | .brand\')" != '"amd"' ];\
  then\
    if [ "$(gpu-detect listjson | jq '.[\'$i\' | .subvendor\')" !=  
'"Advanced Micro Devices, Inc. [AMD/ATI]"' ];\
    then\
      echo "$(gpu-detect listjson | jq '.[\'$i\' | .name\')";\  
      echo "GPU $x is not AMD, incrementing counter";\  
      ((x+=1));\  
    fi\  
  fi\  
done

echo "Searching for AMD cards"

for (( c=0; c<$(gpu-detect listjson | jq 'length'); c++ ))\
do i=$c;\
  if [ "$(gpu-detect listjson | jq '.[\'$i\' | .brand\')" == '"amd"' ];\
  then\  
    if [ "$(gpu-detect listjson | jq '.[\'$i\' | .name\')" == '"Radeon  
RX 6800"' ];\  
    then\  
      echo "GPU $x is RX 6800";\  
      upp -p /sys/class/drm/card$x/device/pp_table set  
smc_pptable/FreqTableFclk/0=1550 --write;\  
      ((x+=1));\  
    else\  
      echo "$(gpu-detect listjson | jq '.[\'$i\' | .name\')";\  
      echo "GPU $x is not RX 6800, incrementing counter";\  
      ((x+=1));\  
    fi\  
  fi\  
done
```