

HYPERHDR & BACKENDS HDR

For the system to work, it is important that the order of installation be respected.

Installation of PicCap

First of all, it is recommended to start with a clean installation.

- Remove PicCap if it was installed then restart the TV.

Install PicCap via the Homebrew channel or the **webos manager application*** then enter the interface via the TV

- Select a '**backend**' (Old TV or New 2020+), check '**Autostart**' and click on '**Reboot TV**' this manipulation will generate the config.json and the Autostart.

We will come back to the PicCap configuration later.

*configuration webos manager ci-dessous

To facilitate the installation, we use the program Device Manager for Webos which will allow us to install the .ipk from our PC.

For Windows :

<https://github.com/webosbrew/dev-manager-desktop/releases/download/v1.5.2/webos-dev-manager.1.5.2.exe>

For MacOS :

<https://github.com/webosbrew/dev-manager-desktop/releases/download/v1.5.2/webos-dev-manager-1.5.2.dmg>

Using Device Manager for Webos:

- Start the program.
- In the left menu, select +Add Device.
- Fill in the connection options:



The screenshot shows a form titled 'Add Device' with the following fields and values:

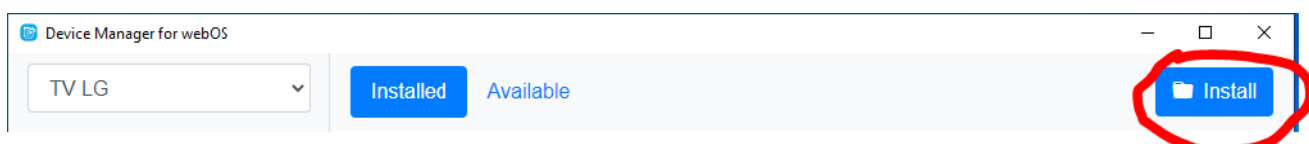
- Name: TV LG
- Host Address: TV IP ADDRESS
- Port Number: 22
- SSH Username: root
- Authentication Method: Password (selected from a dropdown menu)
- SSH Password: alpine
- Description: (empty text area)

At the bottom of the form, there are three buttons: 'Help', 'Close', and 'Add'.

If you have not changed the default login information you should fill in the information as above.

You will have understood that **TV IP ADDRESS** is to be replaced by the IP address of your TV.

- On the main program page we use the Install button in the upper right corner, to install the necessary .ipk.



Download the necessary ipk :

HyperHDR :

<https://www.dropbox.com/s/9760p29marefuog/HyperHDR.ipk?dl=0>

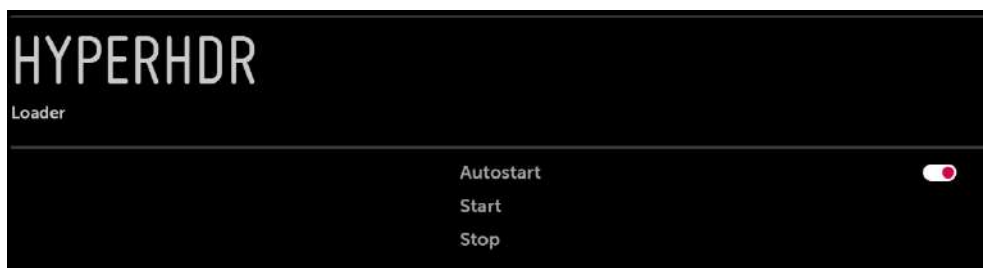
BackendsHDR :

<https://www.dropbox.com/s/w2wjh2rmx9met6t/BackendsHDR.ipk?dl=0>

Once you have downloaded the 2 .ipk files, install them with Device Manager for Webos but do not launch them.

- HyperHDR :

- From your TV, go to the applications menu and launch HyperHDR



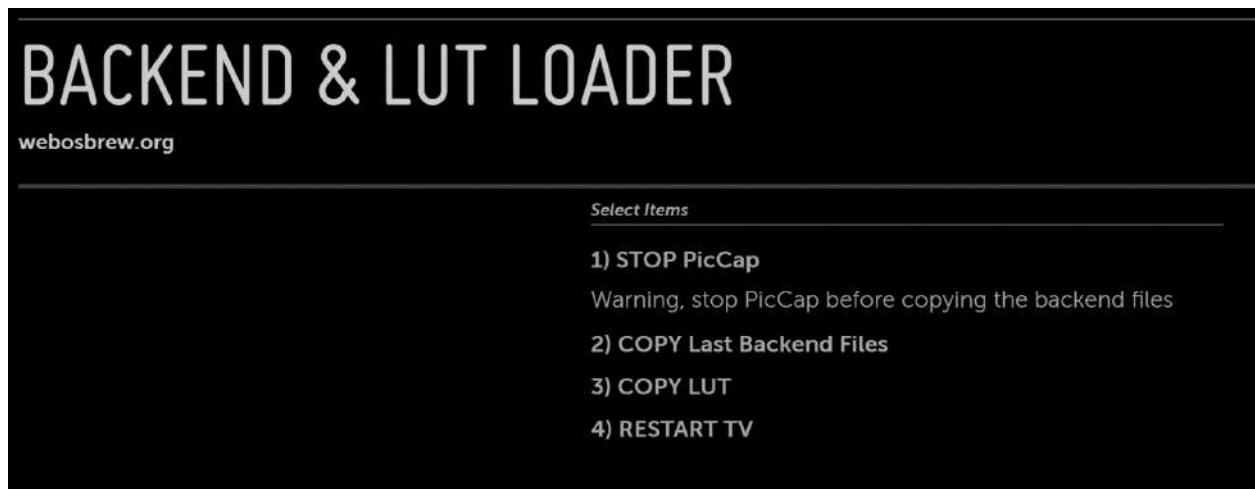
- Install Autostart

Currently a bug will force you to deactivate, reactivate the autostart even if visually you see it activated.

Restart your TV.

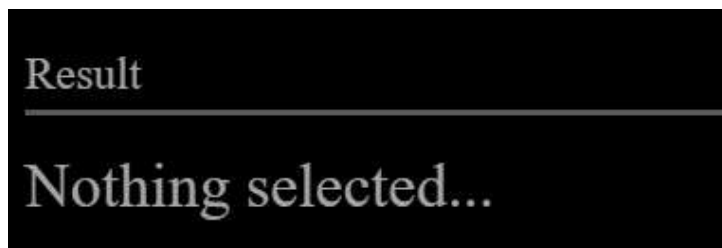
- BackendsHDR

- In the same way as for hyperHDR, go back to the application menu of your TV and launch BackendsHDR.



We will modify the backends and install a LUT to correct the dark image effect present on the HyperHDR preview.

After each action, you will be notified of the successful completion of the operation in the lower left corner of your screen



- To replace the backends, stop PicCap capture by selecting option 1.
- Replace the backends by selecting option 2.
- In the same way we install the LUT, option 3.
- Restart your TV by clicking on option 4.

After restarting your TV you can remove the BackendsHDR app (optional)

Configuration of PicCap

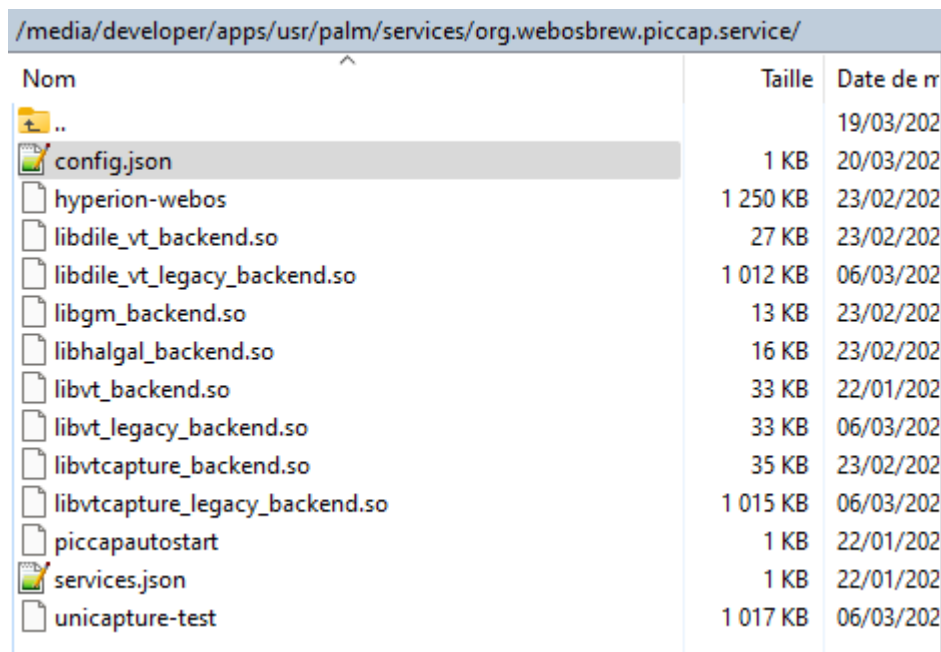
By default we have enabled the automatic recognition of the backend and HyperHDR should already be able to capture the image.

The automatic recognition will check on your TV if 'libvncapture' is present, if not, it will automatically switch to 'libdile_vt'.

On some TVs both backends can work, by default it will always be 'libvncapture' that will be installed. If you have problems with 'libvncapture' you can always test 'libdile_vt' by replacing it manually in the config.json.

In order to modify the config.json file, you will need to use an SFTP client such as WinSCP.

- Access the folder containing the backends and the config.json by connecting to your TV.



/media/developer/apps/usr/palm/services/org.webosbrew.piccap.service/		
Nom	Taille	Date de m
..		19/03/202
config.json	1 KB	20/03/202
hyperion-webos	1 250 KB	23/02/202
libdile_vt_backend.so	27 KB	23/02/202
libdile_vt_legacy_backend.so	1 012 KB	06/03/202
libgm_backend.so	13 KB	23/02/202
libhalgal_backend.so	16 KB	23/02/202
libvt_backend.so	33 KB	22/01/202
libvt_legacy_backend.so	33 KB	06/03/202
libvncapture_backend.so	35 KB	23/02/202
libvncapture_legacy_backend.so	1 015 KB	06/03/202
piccapautostart	1 KB	22/01/202
services.json	1 KB	22/01/202
unicapture-test	1 017 KB	06/03/202

Edit the config.json file using a text editor such as Notepad++

REBOOT YOUR TV AFTER EACH CHANGE IN THE FILE TO RESTART PICCAP

It may happen that the Autostart file is not generated. If this happens, you can create a symbolic link by executing the 2 commands below in ssh :

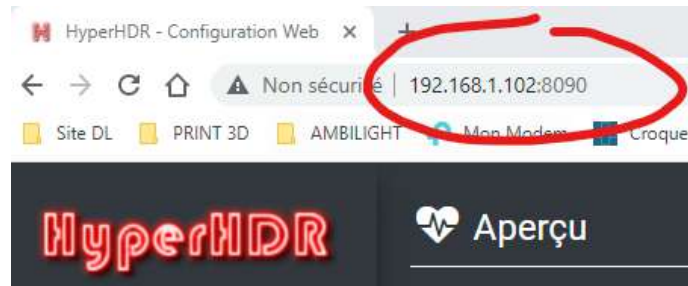
```
chmod +x /media/developer/apps/usr/palm/services/org.webosbrew.piccap.service/piccapautostart
```

```
ln -s /media/developer/apps/usr/palm/services/org.webosbrew.piccap.service/piccapautostart /var/lib/webosbrew/init.d/piccapautostart
```

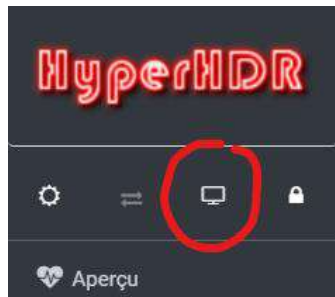
Finish by rebooting the TV, the Autostart should now work.

HDR Correction

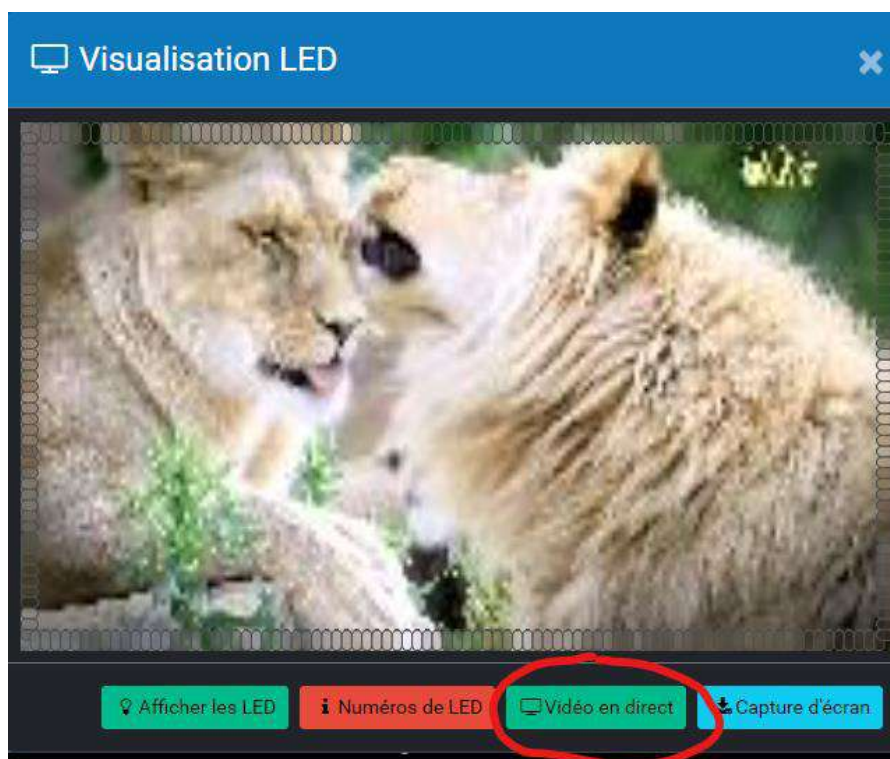
- Via your internet browser, access HyperHDR by typing 'the IP address of your TV: 8090'.



- In the left menu click on the preview.



- The preview opens in a Popup, click on Live Video.



- On your TV, choose an HDR or DV channel and check if the preview image is darker than the TV image
- If the images are similar, you won't need to enable tone mapping, which uses the LUT to correct color and brightness.

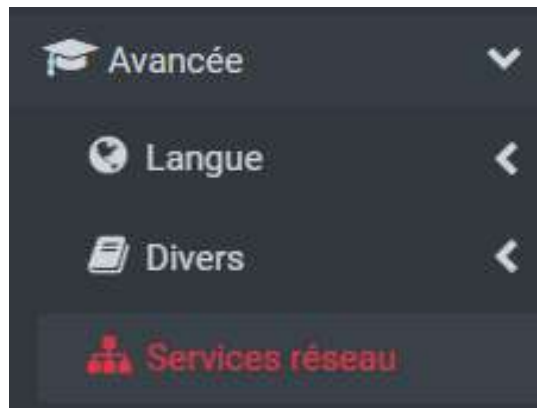
Example not requiring tone mapping:



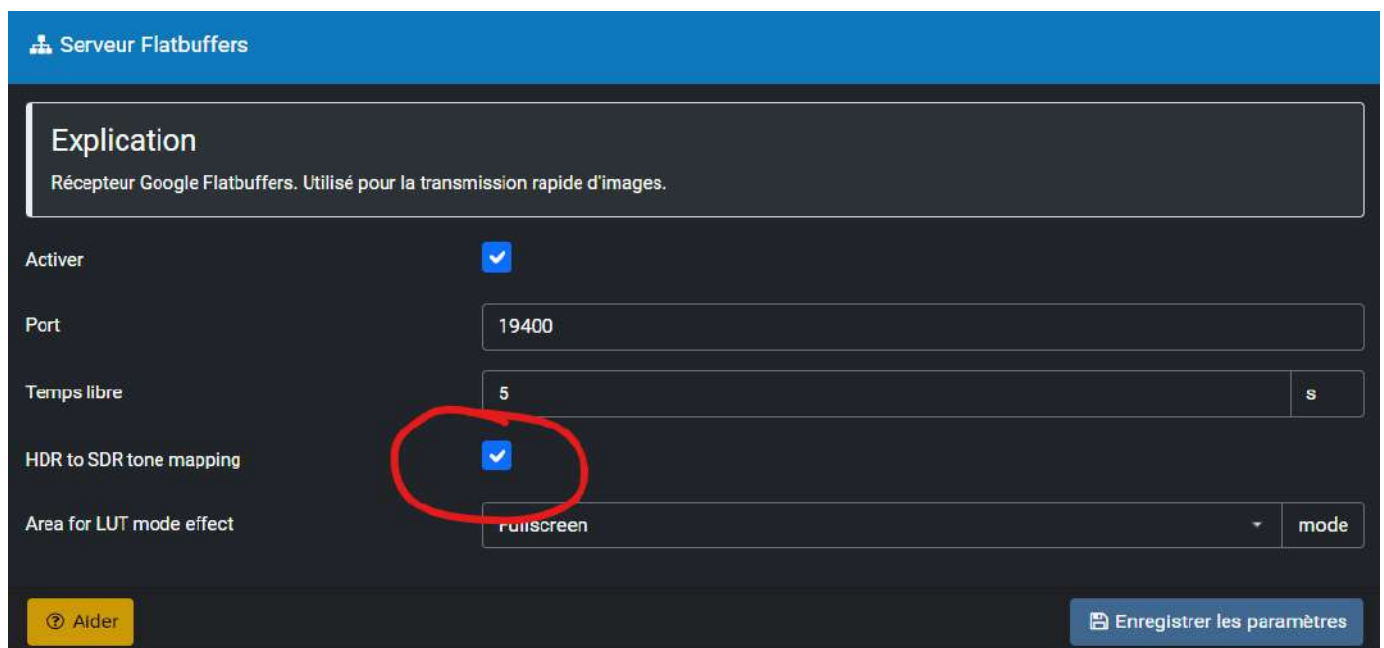
Example requiring tone mapping:



If you are in the case where tone mapping is required, go to the left menu of HyperHDR section Advanced/Network Services



- In the FlatBuffers Server window check the 'HDR to SDR Tone Mapping' box



- Once the box is checked you can choose to leave Fullscreen or to switch to Light
- This option only affects the HyperHDR preview.
- If you are on an **SDR** channel when you check the tone mapping box, it will be necessary to go to the '**Remote Control**' tab and deactivate '**HDR (global)**'.
- Don't forget to save the settings.

Restart the TV so that the mode synchronizes

Configuration of the LEDS.

- If you are using Wled on an ESP, it is important NOT to CHOOSE the Wled mode in the control panel.
- The TV will not handle this process properly, it will make your wifi network unstable and your TV will enter a reboot loop.
- Use UDPRAW mode with port 19446.

The screenshot shows the Wled control panel interface. On the left, there is a sidebar with the following labels: "Type de contrôleur :", "Nombre de voyants du matériel", "Ordre des octets RVB", "Temps de rafraîchissement", "IP cible", and "Port". The "Type de contrôleur :" dropdown menu is open, showing a list of controllers. Under the "Réseau" category, "udpraw" is selected and highlighted in blue. Other controllers listed include "RPI GPIO", "piblastar", "atmoorb", "cololight", "fadeecandy", "nanoleaf", "philips Hue", "tpm2net", "udpartnet", "udpe131", "udph801", "wled", "yeelight", "USB/série", "adallight", "atmo", "dmx", and "karate". The main configuration area on the right has the following fields: "264" (with a red "TV_LG Picoap Adalight" warning), "RVB" (dropdown), "0" (with "Mme" and "- +" buttons), "192.168.1.109", and "19446". At the bottom right, there is a button labeled "Enregistrer les paramètres".

ESP connection and Wled configuration:

You will find a pdf tutorial by clicking on the link below:

https://www.dropbox.com/s/94z205qfek6qm8k/Lolin%20Wemos%20D1%20connection%20and%20Wled%20installation_ENG.pdf?dl=0

Finish by rebooting your TV

CREDITS

Discord Ambilight.fr

Discord OpenLGTV

HyperHDR : Awawa

Integrated HyperHDR compilation : Neogeo, tuxuser.

BackendsHDR : NeoGeo, Bahoue

HDR and anti-flicker correction patch : Chrischan

RootmyTV : root of LG TVs

PicCap, TBSniller : Integrated capture

Hyperion.NG

Tuxuser, Lord-Grey, infowski : For Hyperion integration

Beta testeurs

Certainly others that I would have forgotten.
(Don't hesitate to let me know to be added)