

# HDMI event handler for SBC Tinkerboard

We use **ARMBIAN** Linux for Tinkerboards. We found HDMI events are not handled by default in Armbian. As a result monitor might go to "Power Safe" mode after Power On, HDMI cable connected or resolution changed.

We added HDMI event handler to solve this problem.

1. Script **hdmi-toggle** to handle HDMI is placed in /usr/local/bin folder

hdmi-toggle

```
#!/usr/bin/env bash
USER="$(who | grep :0\ ) | cut -f 1 -d ' ')"
echo USER ${USER}
sudo chown operator:operator /home/operator/hdmi-toggle.log
echo HDMI-TOGGLE >>/home/operator/hdmi-toggle.log

export XAUTHORITY=/home/${USER}/.Xauthority
export DISPLAY=:0

##### Settings #####
# Use 'xrandr' to find these
#DP="DP-1"
#VGA="VGA-1"
HDMI="HDMI-1"
#INTERNAL_DISPLAY="LVDS-1"

# Check /sys/class/drm for the exact location
#DP_STATUS="$(cat /sys/class/drm/card0-DP-1/status)"
#VGA_STATUS="$(cat /sys/class/drm/card0-VGA-1/status)"
HDMI_STATUS="$(cat /sys/class/drm/card0-HDMI-A-1/status)"

echo ${HDMI_STATUS} >>/home/operator/hdmi-toggle.log

# Do no change!
EXTERNAL_DISPLAY=""
# Check to see if the external display is connected
if [ "${DP_STATUS}" = connected ]; then
    EXTERNAL_DISPLAY=$DP
fi
if [ "${VGA_STATUS}" = connected ]; then
    EXTERNAL_DISPLAY=$VGA
fi
if [ "${HDMI_STATUS}" = connected ]; then
    EXTERNAL_DISPLAY=$HDMI
fi

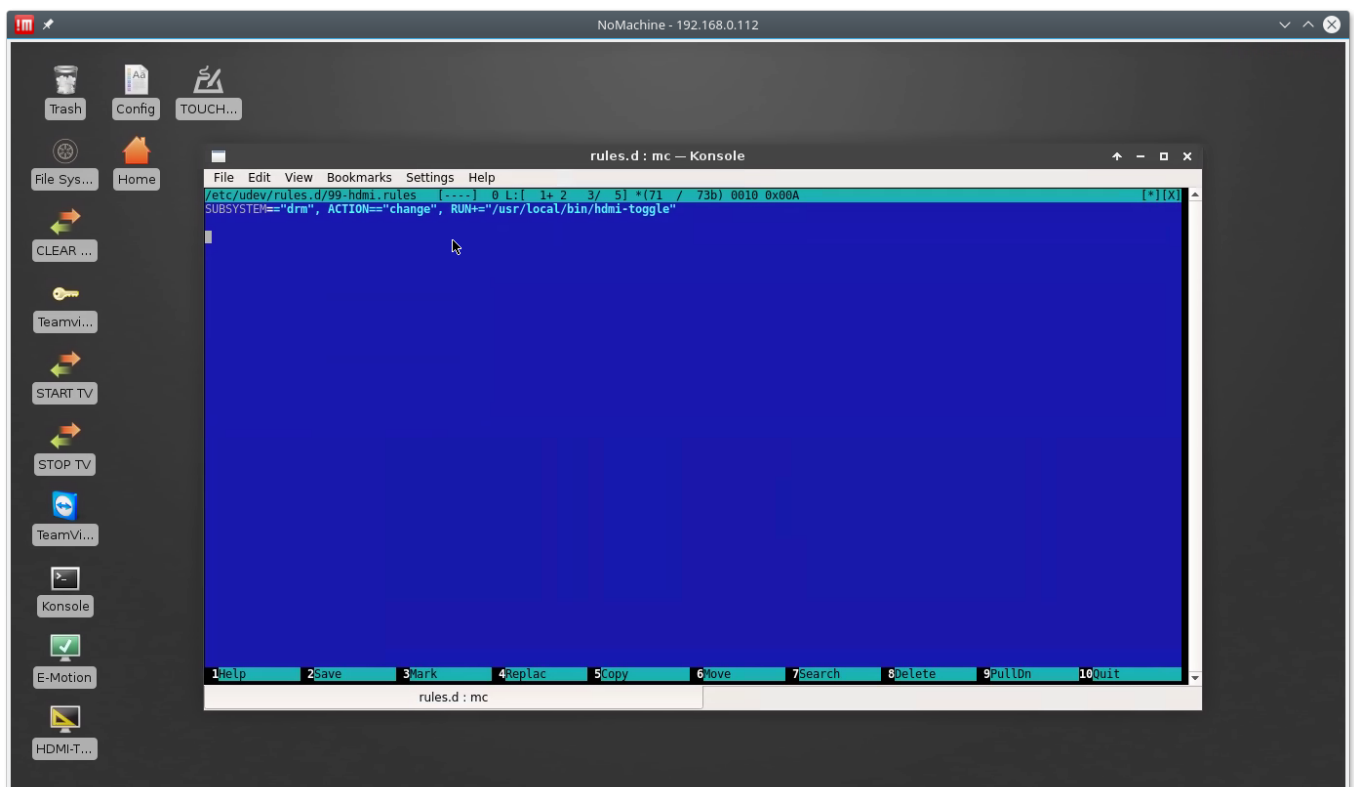
# The external display is connected
if [ "${EXTERNAL_DISPLAY}" != "" ]; then
```

```
# Set the display settings
xrandr
xrandr --output HDMI-1 --auto
# xrandr -s 1368x768
else
# Restore to single display
xrandr --output HDMI-1 --off
fi
exit 0
```

2. **UDEV** rule should be setup to catch events from HDMI. File "99-hdmi.rules" is added to "/etc/udev/rules.d" folder. HDMI rules are

99-hdmi.rules

```
SUBSYSTEM=="drm", ACTION=="change", RUN+="/usr/local/bin/hdmi-toggle"
```



From:  
<http://docs.pv-automation.com/> - myCNC Online Documentation

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Last update: 2018/11/18 23:27

