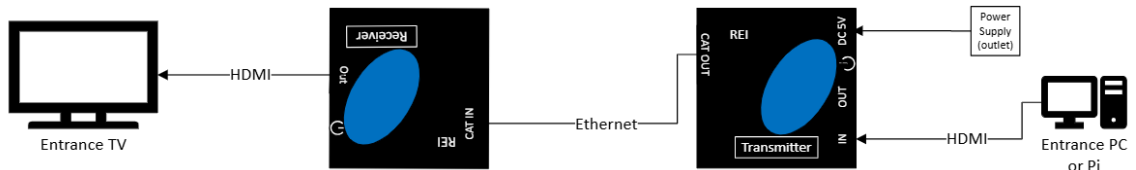_____

Entrance Module Flickering

This document will serve as a basic work instruction for troubleshooting when a TV is flickering. It will focus mainly on setups that have an HDMI to Ethernet Transmitter installed but will also touch briefly on HDMI only systems. Keep in mind if the site has a Pi any changes made to the HDMI system will require a reboot of the Pi. Below is a diagram of how the system is connected:

1. Document how frequent the flickering occurs. This will be important for monitoring in future steps. Also, document if the entrance module PC (or Pi) is connected via an 80-foot HDMI cable or an HDMI to Ethernet transmitter.

    a. If the device is a Pi on an 80-foot HDMI cable this is likely due to signal degradation that happens over HDMI. Signal degradation occurs on HDMI cables over 50 foot or longer and with the Pi being a low power device is likely to see this. **It is advised the site switch to a HDMI to Ethernet Transmitter setup if this is the case.**

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2. Power cycle the Transmitter of the HDMI to Ethernet (REI) and the entrance module PC or Pi. This can be done by unplugging the power cord going into the unit and plugging it back in after waiting 20 seconds. Monitor to see if the flickering continues. This step is taken because the HDMI to Ethernet Transmitter can send errored data which will appear as flickering.

3. Inspect the receiver of the HDMI to Ethernet (REI) transmitter and HDMI cable connected to the TV. Pull the HDMI and transmitter apart to inspect more. Sometimes these units get corroded due to water in the rear of the Entrance module. If there is corrosion be sure to take a picture to add to the ticket.

4. Replace the HDMI cable from the HDMI to Ethernet (REI) receiver to the TV with the one from the Mac Mini and monitor. This will determine if the HDMI cable was damaged and needed to be replaced.

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5. Swap the HDMI cable in the TV to a different HDMI port on the TV and swap the TV to the correct input (usually this will be between HDMI 1 and HDMI 2 on the TV). Monitor for any flickering. This will tell us if the port on the TV is damaged if the flickering continues.

6. Remove the HDMI cable from the Entrance PC or Pi and plug it into the Mac Mini and monitor for flickering. This will help us determine if the PC or Pi was causing the flickering or if the issue continues the Mac Mini.

7. Remove the HDMI cable from the HDMI to Ethernet (REI) Transmitter. Plug the Entrance PC or Pi into the transmitter with another known working cable. Monitor for flickering. This step will help us determine if the HDMI has been damaged. If the device is a Pi, please see the sub steps as well.

    a. If they are using a micro-HDMI to HDMI dongle have the site purchase a micro-HDMI to HDMI dongle locally to fully test the dongle and rule it out as a possibility.

    b. If they are using a full-sized Micro HDMI to HDMI cable you may have to purchase one locally to fully test this cable and rule it out as a possibility.

8. Bring the HDMI cable and the HDMI to Ethernet receiver into the office. Unhook the ethernet cable from the transmitter and grab a known working ethernet cable and connect both the transmitter and receiver to each other. Once this is done plug the unit into the Mac Mini monitor. Watch to see if the unit still flickers. If the unit is still flickering this step removes the ethernet cable as a suspected failure point. This leaves only the HDMI to ethernet extender parts suspect. Be sure to get pictures of both the transmitter and receiver and include them in the ticket.