RIPPLE INJECTION PROBLEMS – CHECK LIST

Before you go and install a Ripple Filter please go through this Check List to rule out a mis-diagnosis. We have found that the symptoms' are similar but results are not.

STEP 1.

Did You Know these are the most common misdiagnosed problems that a Ripple Filter will not fix;

- Incompatible LED lights and Dimmers, even from the same Brand, can cause lights to flicker. When the Ripple injection is induced this exaggerates the problem leading to an assumption a Ripple Filter will fix the issue. It won't! This is a known issue in the Lighting Industry.
    - **Check** with the Brand/Distributor/Manufacturer what they recommend as suitable Dimmer models and LED light models that are compatable.
    - **Check** is the Dimmer correctly configured?
- LED lights do not always provide the correct Load for a Dimmer. This flicker can be mistaken as Ripple Injector Signal.
    - **Check** by replacing LED light with Halogen equivalent to see if this reduces the flicker. Note 1: Halogen LED has a bigger load the extra load may reduce the flickering. Tip: Add Halogen light in furthest LED socket in circuit if possible. Note 2: Try Flicker free LED which have higher capacitance and will also reduce the flicker if the load is the issue.
    - **Check** if flickering is occurring on all light circuits or only the circuits with Dimmers. If circuits with Dimmers are the only ones flickering then adding a Ripple Filter is unlikely to fix this issue.

STEP 2.

Ripple Filter installed with little to no difference to LED flickering;

Did you know when we isolate the Ripple Injection Signal in our Laboratory we always improve or remove the effects of the Ripple.

- Is it wired correctly?
    - **Check** installation guide. Copy on Thor website Product pages of Ripple Filters
    - **Check** there is no common Neutral bar connections.
        - **Note:** If using Neutral bar then noise from other circuits will cancel the Filter's effect.
- How many Lighting circuits are there?
    - **Check** a separate Ripple Filter is wired per lighting ciruit. Individual Lighting Circuits need their own Ripple Filter

- Is the correct Filter selected for the area?
    - **Check** the correct frequency for your area matches the filter selected (ask your Utility Supplier for this information)
        - **Note:** 744/750Hz or 1042/1050Hz
    - **Check** location. Are you on the boundary of two different ripple signal zones?
        - For instance, where one frequency is used on one side of the road and the other frequency on the other side of the road may mean both Ripple Filters may need to be installed.
    - **Check** Location-Distance from ripple injection point? Magnitude of signal maybe too great to filter out.
        - **Note:** Possibly too strong of a ripple signal for the filter to effectively clear out. There are Performance Limits.
        - **Note:** Ausgrid allows up to double modulation compared to other Utility Suppliers. So Ausgrid customers are more likely to experience this issue
    - **Check** Possible tolerance issue with the filter. Try a different filter.

Step 3

Step 1 and 2 checked and still having issues;

Did you know each site is unique and has unkown and often uncontrollable variables. There is no silver bullet with this Ripple Injection issue, as one site may get 100% resolution while another even a short distance apart may not.

- Try change the lighting circuits to a different Phase.
- Video the flickering and send to us for analysis
- Is there other external noise on the circuit from somewhere in the premises? Examples of sources could be inverter air conditioners, fridges, dishwashers, any device containing a motor
    - This might be resolved with the addition of a DRM95 20A to filter noise coming through different range of unwanted frequencies.
    - Remember: if using our DRM95 20A in Series with a Ripple Filter this installation must have a totally separate and isolated Neutral. Please refer to the recommended wiring diagram on the instruction manual provided with your Ripple filter or by going to Thor Technologies website.