

# FPL's Power Line Interference Investigation Process

(with some useful supplemental commentary)

1. **Customer Care receives complaint from customer** via phone or website. When calling Customer Care use the phrase "RADIO INTERFERENCE." If the call taker doesn't seem to understand, tell them you believe the power lines are interfering with your **television**. You can sort it out with the Utility Interference Investigator.

## **Important things to remember when speaking with Customer Care:**

a. The person taking your call IS NOT AN EXPERT on everything that goes on at the utility. In most cases, the person taking your call won't even be able to spell "interference" much less explain to you how the company will deal with it. Just make it clear that you need someone to investigate interference to your radio (or television.)

b. The person taking your call must be polite. They really appreciate it when you are polite, patient and to the point. Lectures, anecdotes, opinions, insults and threats will only slow the process and confuse the issue. You don't want to create delays. Once the call taker understands that you are experiencing (some kind of) INTERFERENCE, they will ask a series of questions. Just answer the questions simply and courteously. Save the details for the Utility Interference Investigator. **Before you hang up on the call taker, ask for the Service Order Number.**

2. **Customer Care creates a Service Order** in the FPL Mainframe which is routed to Radio Operations. All FPL Interference Investigators are Radio Techs thoroughly familiar with radio systems and the impact of power line interference. Some actually have respect for Amateur Radio Operators.

3. **Service Order is assigned to an investigator.** Interference Investigation Service Orders are assigned to investigators typically twice a week. The Investigator is obligated to make contact with the customer within 2 to 3 days of the service order's creation. If you haven't heard from an investigator by the 11<sup>th</sup> day after you call, make the call again. (Did you keep the Service Order Number from your first call so you can ask about its status?)

4. **The Customer is contacted for a detailed description of the problem.**

The Utility Interference Investigator needs to know at least these 5 things:

a. **Is the interference continuous or intermittent. If intermittent, what Days and Times does it occur?**

b. **What is the highest frequency at which you can detect the interference?**

c. **What (make & model) of equipment is being affected? What kind of antenna is used by that equipment?**

d. **Will the Investigator be allowed to listen to and observe the affected equipment in your home or business?**

e. **Does the interference go away when it rains?**

Try to avoid offering any more. Answer questions simply. Even if you think you know what pole might be the offender, don't share that with the investigator now. See if he finds the same pole during his survey. Please be polite. Please be brief and to the point. Just answer questions.

Some investigators are hams. Most are not. Resist the urge to impress the investigator with your knowledge, expertise, experience and DXCC status. Stick to facts relevant to the interference. Do not speculate about what you think might be the cause. That information is of no value to the investigator. He must find and verify the source. If you are convinced the problem originates from a certain pole or device, keep it to yourself. See if the search turns up the same result.

5. **Investigation is done.** The investigator is obligated to fit interference work in with many other duties. Investigators also maintain voice and data two-way radio equipment used by the utility. It may take more than one survey to locate the source or sources. There is no specified time limit for completion of interference investigations. Most get done within 2 to 3 weeks. Good investigators will keep you informed about the progress of the work. If you aren't informed, call the investigator. You did get his contact info, right?

6. **Utility-owned source located. Work request created ordering repairs.** Investigator enters data into a computer system creating a "work request." GET THE WORK REQUEST NUMBER! The work request goes to a scheduler. If an outage is required to complete the repairs, then additional time is required to notify customers of the planned outage. Internal policy dictates that interference work requests are supposed to be scheduled and the work completed within 10 to 30 days. The utility rarely meets that timeline unless the case affects public safety or aviation. Routine interference resolution work is the lowest priority. Ask if the investigator will accompany the crew when the work is done. If so, the problem will be resolved more quickly.

**Special Note:** Under current utility policy, the investigator's responsibility ends when the Work Request is created and sent to scheduling. The investigator has LITTLE, if any, INFLUENCE whatsoever over the scheduling and completion of any work request. Only the customer can exert influence to escalate a work request. That's why you want the Work Request number. If the utility takes more than 30 days to complete the work request, you should call Customer Care, ask for a supervisor and ask about the status of the work request. Only YOU can do this. The investigator cannot. Asking a supervisor escalates the matter and inquiries are made. This usually greases the skids but only if 30 days have passed since the work request was created. Current utility practice is to send the repair crew out accompanied by the investigator to insure the crew's work actually fixes the problem. A good investigator makes sure he is there but the utility does not require it. If the investigator accompanies the crew, the problem usually gets resolved during the first crew visit. Ask if your investigator plans to accompany the crew.

7. **NON-utility owned source located.** The utility cannot and will not resolve interference sources that originate from non-utility owned equipment. If the investigator determines that your interference originates from non-utility equipment, policy dictates that the location of the source not be revealed (for liability reasons.) You will have to locate the source yourself and work out the problem on your own. The process ends here.

8. **Work Request Completed.** A good investigator will verify with you that your interference problem has been resolved to your satisfaction. If multiple sources are found in the survey, this verification will come after the last source has been repaired. The process ends when you indicate you are satisfied.

### **Additional Details:**

**Weak Additional Sources** Occasionally, repairing one source will reveal one or more weaker sources that could not be heard or located until the loudest primary source is fixed. A good investigator will find all sources and insure they are repaired.

**Beachside Realities** If you live in a beachside community, you will likely experience frequent power line interference problems. The salt climate is corrosive causing continuous deterioration of all metal devices. The utility can't possibly do enough maintenance to prevent this. You have two choices: 1) learn to work well with the utility to get problems resolved or 2) relocate to the mainland.

**Interference can be seasonal.** In the winter months, the cool dry air causes wooden poles to shrink. Nuts and washers work loose creating gaps that can arc continuously. This part of Florida is subject to lightning strikes almost every month. Lightning damage to certain devices on poles can cause severe interference. These are simple facts of Florida life. The utility cannot prevent these types of failures.

**The Junk Invasion** Importation of cheap, poorly designed and built electronics is raising the noise floor everywhere. Many faulty electronic devices produce interference that is quite similar to power line interference. The flood of these nuisance "transmitters" into homes everywhere has resulted in an increasing incidence of interference from within the home. As long as interference investigation is offered by the utility as a free service, it is wise to take advantage. Just keep in mind that privately-owned interference sources cannot be dealt with by the utility. Learning to recognize and locate privately-owned sources from utility-owned sources may be a worthwhile skill to develop. (Learn to DF interference sources.)

**No Speculation** When searching for interference it's important to trust your equipment. It is equally important to ASSUME NOTHING about the source. It's easy to be fooled by your eyes. Only your equipment will lead you to the actual source. Assuming that what you are hearing might be from some specific source is foolhardy. Your eyes can't see RFI. Your ears can't hear RFI directly. You must rely on your equipment to lead you directly to the source.

One of the reasons that a good investigator has no interest in your speculation is his desire to keep an open mind and not color his perceptions during his survey. Assuming nothing insures an accurate find with the fewest number of tries.

#### **Leading causes of Power Line Interference:**

Lightning arrestors

Loose hardware

Poorly designed and built Consumer electronic equipment including battery chargers, computer power supplies, computer monitors, electronic door bell systems, poorly shielded microprocessor-controlled equipment

Switching power supplies

Door Bell Transformers

Thermostats

Cycling Street Lights

Transformers (extremely rare sources of interference. That's the reason they are listed LAST.)

**Learn the telephone number for the utility. Keep it handy. Use it when necessary.**