

## **Profitability Improvements**

### **How can I improve productivity and eliminate unnecessary downtime?**

Surprisingly, it turns out that the majority of glitches, hang ups, lock ups, system locks and “No Problem Found” service calls are the result of operating sensitive electronics with raw utility grade power. According to many of our users, all these unproductive moments can usually be avoided by installing the Digital QC, which reduces or eliminates all real time disturbances.

### **Isn't power protection already built into the office equipment?**

Almost never. Unfortunately, power disturbances are environmental and are your responsibility. Equipment manufacturers rely on the servicing dealers and utility companies to inform the end user of the need for power protection.

### **What are some of the symptoms of excessive neutral-ground voltage?**

Lockups, false error codes, misfeeds, or phantom problems that come and go without any obvious cause. Short tempers, irritability and mounting frustration at a personal level.

### **Why doesn't the manufacturer build this into their products?**

We are talking to all the major manufacturers about incorporating ESP technology in their equipment directly. However, the status quo in today's market is that all power filters are considered “aftermarket” products to be added by the dealer or end user.

### **Why is it important to protect data lines when hubs provide for protection?**

Actually, most hubs don't have protection to any significant extent. Even in cases where they do, the data terminal equipment can be located a significant distance from the hub, so if a surge is induced into the data line close to the terminal, the majority of the surge voltage will appear at the terminal. That is why we recommend protecting every "node" in the network with an ESP power filter.

### **Should I protect my analog products?**

Absolutely, field studies that have been conducted on large populations of analog machines show a significant cost savings when ESP power filters are used.

### **What will a power protection program do for my business?**

Improve productivity, protect your investments, reduces your costs and saves you money. A real power protection program protects not only your equipment from catastrophic (lightning) and disruptive (noise or surges) damage, but protects your revenue and profits from erosion due to excessive service calls, replacing damaged and undamaged electronic parts, equipment downtime and misallocated service resources. Improve your bottom line and increase customer satisfaction. For more information go to our web site or click on “Contact Us” and an ESP Regional Manager or Sales person will be happy to answer your questions on how we help your business specifically.

## **What makes ESP's Digital QC different? How can I convince my customers to spend \$150.00 for your units when they can get one at Office Depot for \$ 15.00?**

How can a \$19.95 surge protector be expected to protect a \$2500.00 computer system, fax machine, or home entertainment center from the ravages of the increasing frequency of power spikes, surges and line noise?

The answer is simple. *It can't....*because it does not have the components and technology to provide the protection demanded by the latest sophisticated microprocessor circuitry at the heart of these contemporary "electronic wonders". *"Come on. You're pulling my leg. But what about that amber light on the protector?"* If the protector's light doesn't light up, it is simply indicating that the "protector" is no longer offering even "one-event" or "low-incident" protection.

An inexpensive surge protector can't provide enough protection because today's sleekly sized, affordably priced fax machines, copiers, audio, video and home theatre equipment and appliances are driven by microprocessors. One densely constructed tiny chip replaces thousands of components that enabled previous generations of electronics. However; one of the side effects of the microprocessor's density is the product's greater vulnerability to power fluctuations. Left unprotected, today's "electronic wonders" can be easily damaged, malfunction, or simply die. The answer in the commercial and industrial sector has been to use industrial grade power filters. Until recently, they were expensive-- but as a result of recent technological advancements, industrial grade power filters have become available to the average consumer at consumer price points.

## **How does an industrial grade power filter protect the equipment?**

Equipment may not be functioning as it should--but you don't know why. The copier may be giving you weird messages. Or, you may be experiencing excessive jams in feeders and sorters, or inconsistent copy quality. Similarly, your fax machine may complain, "Line fail" and may refuse to transmit or transmit at a slower speed. Incoming faxes may even sporadically appear garbled or incomplete. Computer problems are even more surreptitious, since the effects of "dirty power" are rarely considered when files are lost or damaged and sensitive components like hard drives and CPU's prematurely crash. Often, a service technician is called--who makes an expensive "house call"--and who is likely to tell you "there's nothing wrong". Quite simply, your electronic products are under constant stress from "dirty power".

In most cases, today's "electronic wonders" are constantly attacked by an epidemic of electrical disturbances, such as: power spikes (a short burst of high voltage lasting less than 10 milliseconds), power surges (a burst of voltage lasting longer than 10 milliseconds), and electro-magnetic (EMI) and radio frequency interference (RFI) that effect power and data lines. The airwaves are loaded with signals from radios, TV's, garage door openers, microwaves, portable and cellular phones, power tools, power supplies, and electric motors. Another severely damaging contributor is lightening storms--and the sudden return of power after the electrical outage.

The solution is to add a power filter to prevent damaging the electrical disturbances from reaching this equipment. Within the area of power protection products, there are several classes of solutions. (1) low pass power filter technology (effectiveness limited, and parts are simple inductors and capacitors); (2) suppressor technology--BUT the best solution is a (3) hybrid suppressor approach. It is called hybrid, because it contains the first two approaches and functions as a result of more sophisticated components: MOV's, TVS diodes, and gas arresters. Each of these parts is assigned different characteristics and functions. This makes them effective against an entire range of electromagnetic interference frequencies and enables them to deal effectively with high voltage disturbances, regardless of duration.

This includes: **clamping level** (the voltage at which the protector stops damaging levels of voltage from reaching into the equipment. The lower the clamping level the better the protection; **response time** (the speed with which the filter can respond to voltage irregularities); and **energy dissipation** (the amount of power a device can handle. The higher the rating, the better the protection.) Electronic Systems Protection has carefully matched the protection levels to the products to be protected.

### **Why are ESP Power Filters the affordable solution?**

ESP industrial grade power filters employs patented multi-stage, new technology that provides the consumer with the best possible clamping and response time, and energy dissipation. The result is: superior equipment protection. In fact, ESP is so certain about the performance of their products that all of their products are automatically backed by a **written no time limit, no questions asked, full replacement warranty!**

### **How can a surge protector help save me service calls?**

Most surge protectors will only save you from the service calls related to equipment fatalities following a thunderstorm... an ESP power filter like the Digital QC on the other hand... saves on service calls because our filters meet the "NO UPSET" ITIC/CBEMA Standard. By meeting this standard we help avoid equipment failure, downtime and disruption that comes from noise or dirty power. Fewer misfeeds, paper jams, data or logic lockups, and reduced phantom problem service calls are what our customers experience when they connect through an ESP power filter.