

The Story behind the AWEIS Technology (All Weather Electronic Ignition System)

Development of the All Weather Electronic Ignition System began in the Fall of 2008. The Electronic Ignition System being offered at that time was the “RCM-1” shown at bottom left in the photo below. The RCM-1 consisted of a Honeywell SmartValve enclosed in a weatherproof aluminum box. Due to the fact the Honeywell system was not really designed to be used outdoors (like all other systems on the market today) wind wreaked havoc on the performance of this system. We tried to compensate for the wind by enlarging the Pilot Burner orifice (thereby making a larger, heartier pilot flame) and added a cover to protect the flame from the wind. The end result was a system that worked better than most when it came to performance in the wind but still not up to the level of performance we expected.

Another ‘issue’ with the Honeywell system was the fact it used ‘Flame’ Sensing to monitor the presence of a flame. Flame sensing works great inside an appliance but it does not work well in the wind. Flame sensing technology relies on the Pilot Flame from the Pilot Burner to impinge on a Flame Sensing “Rod” the entire time the Pilot Flame is on. As long as this occurs, the system continues to operate. In the event the Pilot Flame moves away from this “Rod” however, even momentarily – the system interprets that as “there is a problem” and shuts the system down and initiates a relight. In the industry this is referred to as “Cycling”. Wind tends to move the Pilot Flame around – quite a bit actually. And every time it moves the Pilot Flame away from the Flame Sensing Rod – the system begins to cycle. This can occur in winds as light as 5 mph and can be very frustrating to the customer. For this reason we decided to get away from “Flame Sensing” and switched to “Heat Sensing” when we developed the Robert Shaw based system shown at bottom right in the photo below.

Though switching to Heat Sensing helped wind performance considerably there were other issues we had to resolve. After months of testing we realized the key to developing a superior system was in having a “Controller” (circuit board with programmed microprocessor) developed to control the operation of the system. Every Electronic Ignition system has a Controller which is the ‘brains’ behind the system. The problem we faced however was the fact that all existing “off-the-shelf” Controllers were designed and programmed to be used indoors and we needed one designed to operate in the outdoors. This in turn led to the realization that the only way we were going to have a Controller for the outdoors was if we hired someone to build it for us.

Eighteen months and a considerable investment later the first AWEIS Controller was born. Two months later – after countless hours of testing, evaluation and modification the final Controller was ready for production. In the months that followed we made many software changes and a few hardware changes to further refine the technology and today we are proud to bring you the AWEIS Technology for Outdoor Fire Features!

We encourage you to watch the videos on our website to see for yourself - the AWEIS is truly the system of choice for Outdoor Fire!

