THE **3 STEP** ULTRASOUND **ELECTRICAL** ANALYSIS PROCESS

UE SYSTEMS INC
The ultrasound approach

	LOOSE COMPONENTS	DISCHARGE		
		Corona	Tracking	Arcing
1. SOUND QUALITY	Indications are Repetitive or Potentially Similar to Electrical Faults	Steady, Consistent "Buzzing"	Inconsistent Popping with Buzzing (Bacon Frying)	Violent, Bursts of Energy
2. FFT	Harmonics Measured Unrelated to Line Frequency Intervals – non electrical cause Harmonics related to the line frequency (0.5, 2x) – caused by electrical components	Harmonics Occurring at Line Frequency Frequency Content May be Visible at Half the Height of Harmonic Peaks	Harmonics (*if Present*) Occurring at Line Frequency Observe and Note a Rapid Loss or Absence of Harmonics	Harmonics (*if Present*) Occurring at Line Frequency Observe and Note a Rapid Loss or Absence of Harmonics
3. TIME DOMAIN *If no observable indicators are present, recheck, rerecord, and reanalyze equipment*	Triangular Patterns Indicating Impact or "Ring Down". Repetitive/ Identical Events (Stamping)	Uniform Spacing in Time (T). Average Band Height. Minimal Sound Content Between Discharges	Inconsistency in Time Between Discharges. Sporadic Band Heights. Increase in Sound Content Between Discharges	Inconsistency in Time Between Discharges. Minimal Sound Content Between Discharges. Bursts for (Wide) Extended Durations of Time