

VISUAL INSTRUCTION
ULTRAPROBE 10,000SD
Electrical Inspection

10,000SD ELECTRICAL INSPECTION



Ultraprobe 10,000SD - **Electrical Inspection**: How To Guide

NOTE: UE DMS Software and Spectralyzer Software are available for download at www.uesystems.com

FUNDAMENTALS



Electrical Inspection Using Ultrasound is a Direct, Effective Method for **Immediate** Identification Whether **Electrical Faults** are Present Within Energized Equipment. The **Ultraprobe 10,000SD** Allows for Real Time Inspections and **Recording Capabilities** to Support **Audible** and **Visual Analyses** of Various Apparatus Using an Airborne Approach.



With **Safety** Being Paramount When Inspecting **Energized Electrical Equipment**, Limiting **Exposure** to Operators is Key. With an Airborne Approach, Direct Exposure is Unnecessary With the **Sound** of the Equipment Being The Guide to Real Time **Assessment** and **Severity Identification**.

SAFETY: WRIST STRAP WORN ALL TIMES

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SAFETY



Always **Maintain Safety** When Working Around **Energized** Electrical Equipment. **Never Touch** Any Part of the Ultraprobe 10,000SD to Electrical Equipment. Establishing **Standard Operating Procedures** for the Use of Ultrasonic Technology is **Always Recommended** and Can Help Maintain Safety.



Obey ALL Safety Procedures. Wear Appropriate **Protective Clothing** and Safety Gear. When Inspecting, **Scan** With Elbows at Waist. If Unfamiliar With **Required Safety Procedures**, Consult With **Safety Coordinator** For Detailed Instructions Prior to Inspections.



NOTE: Always Be Aware of the Potential of Arc Flash.

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10,000SD ELECTRICAL INSPECTION



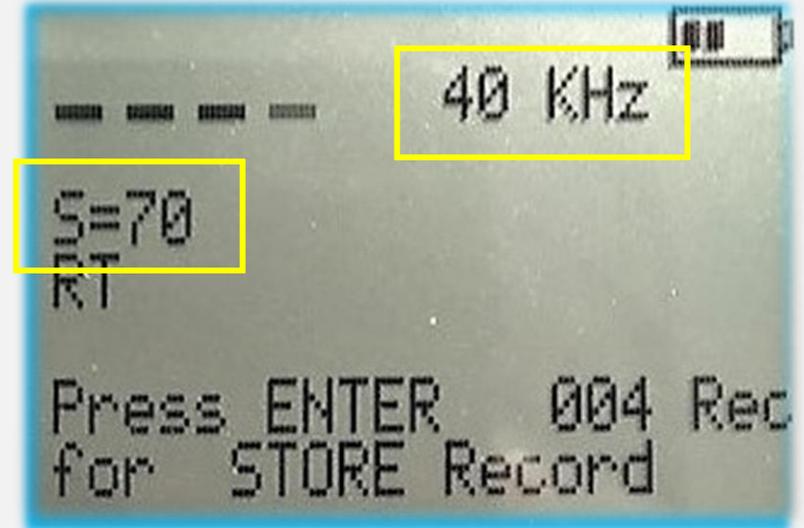
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INITIAL SETUP



To **Power On** the Ultraprobe 10,000SD, Pull and Hold the **Instrument Trigger**. Keep Trigger Pulled for Instrument to Remain **ON**. The Unit Will Power On in The **Main Display**.



The Ultraprobe 10,000SD **Powers On** in Default Mode of **40KHz** (Unless Previously Changed) with the **Sensitivity** at **Maximum** (70).

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10,000SD ELECTRICAL DETECTION



Ultraprobe 10,000SD - **Electrical Detection**: How To Guide

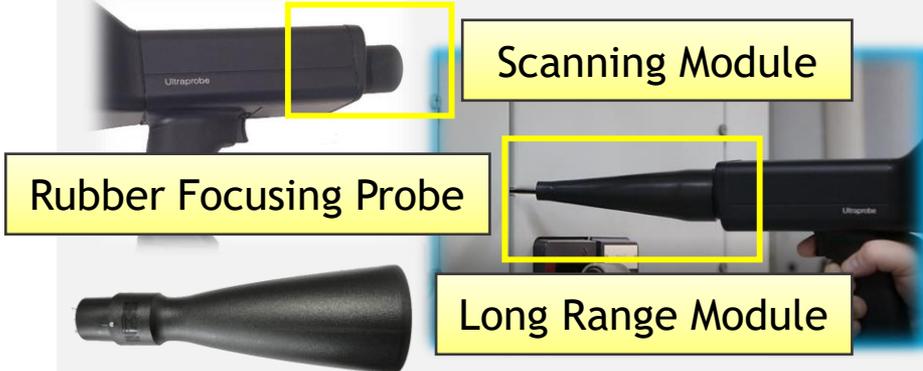
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INITIAL SETUP



To Set Up the Ultraprobe 10,000SD for **Electrical Detection**, Set the Frequency to **40 kHz** Using the Sensitivity Dial. “Click” Dial Until “KHZ” is Flashing, Then Spin to the Desired Frequency.

Once **40 kHz** is Reached, Click the **Sensitivity Dial** Again to Set that Frequency.



Then Insert the **Scanning Module** (SCM) or the **Long Range Module** (LRM) into the Module Port. Modules are Removed by Pulling Module Straight Out of Port **Without Twisting**. **Module Selection** for Electrical Inspections Depend on What **Apparatus** is Being Tested. The Use of the **Rubber Focusing Probe** May Be Necessary for **Precise** Inspection Technique.

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10,000SD ELECTRICAL INSPECTION



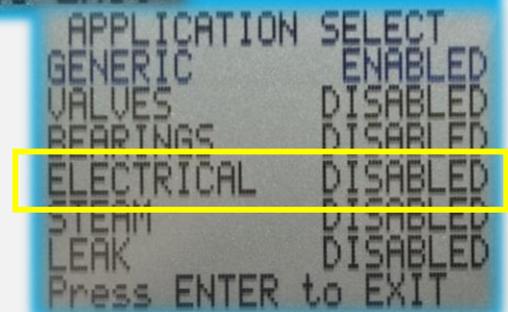
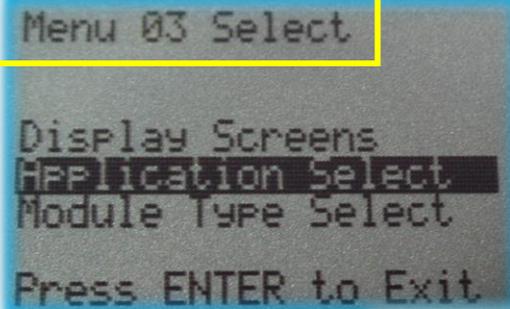
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INITIAL SETUP



Select the **Electrical Application** from the **Setup Menu** Located in the Function Bar. Press the Sensitivity Dial Until the Setup Menu is Flashing, Then Press the **ENTER** Button. Spin the Dial to find **Menu #3**, **Application Select**. To Enter the Menu, Click the Dial Again.



From **Menu #3**, **Application Select**, Spin the Sensitivity Dial to Navigate to **ELECTRICAL**, Then Click the Dial Again to Save That Selection. Once **ELECTRICAL** is **ENABLED**, Press the **ENTER** Button to Return to the **Main Display**.

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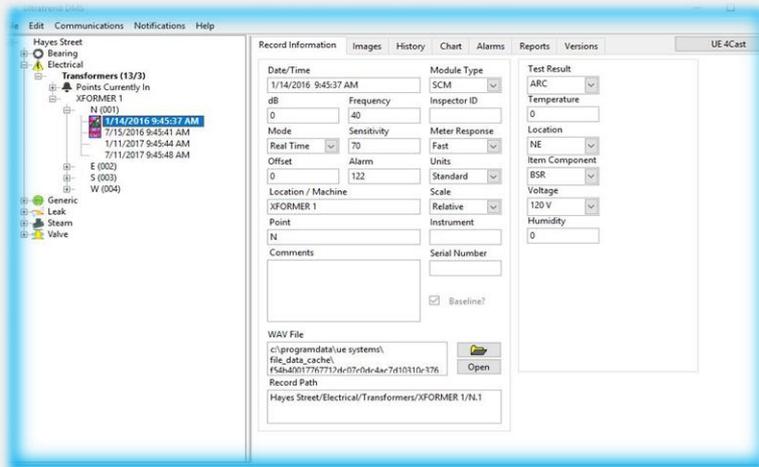
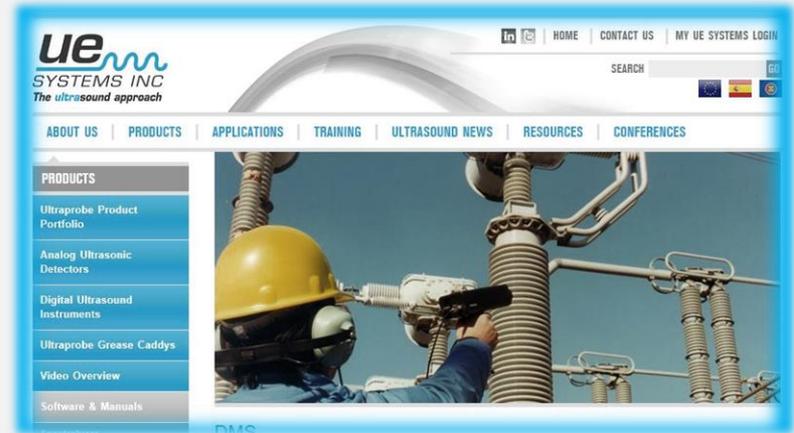
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INITIAL SETUP



If Using the Ultraprobe 10,000SD as a **Route Based Tool**, Downloading the **DMS Software** From UESystems.com Will Allow Inspectors to Build a **Database** for Each Electrical Apparatus Within the Facility. Each Route Can Be **Uploaded** to the UltraProbe for **Organized Data Collection**.



Each **Route** and the Collected **Data** is Stored Within the Plant Created Within the **Ultratrend DMS Software** and Is Available for **Analysis** and **Review** at Anytime. Each Route Can House Up to **400** Individual Inspection Records.

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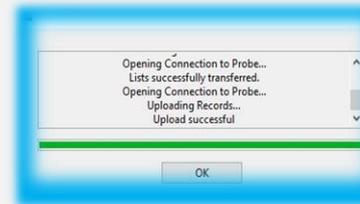
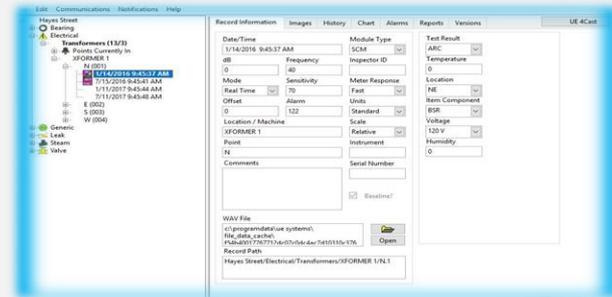
INITIAL SETUP



Upload the Created **Route** From the **DMS Software** to the Ultraprobe 10,000SD Via the Included **SD Card**. Remove the SD Card from the Port and Insert into a **Compatible** Computer or Laptop.



NOTE: For Detailed Information On Uploading and Downloading Routes. See Visual Instruction: Uploading and Downloading.



Highlight the Applicable **Electrical** Inspection Route, Then **Right Click**. Select **SEND GROUP TO PROBE**. This Will Upload the Route to the SD Card. With the Ultraprobe **Powered Off**, Insert the **SD Card** into the Unit and Power On. The Route Locations Will Be **Displayed** and Unit Ready for **Data Acquisition**.

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INSPECTION PROCEDURE



The **Inspection Procedure** for Electrical Applications Will Vary Depending on the Apparatus Being Inspected. Simply **Scan the Air Gaps** Around the Seals **Within an MCC**. If Conducting **External Inspections**, Utilize the **Long Range Module** for Safe Distance and Scan from Every Position to Ensure Coverage and **Signal Quality** is Maximized.



Be Sure to **Scan at an Optimum Speed** Ensuring No Anomalies are **Missed**. Remember, the **Decibel (dB)** Value Has No Bearing on How **Severe Detected Faults** are However Can Be Used as a **Source** Locator. A Small **Position Change** Can Dramatically Alter the Sound Quality as an **Inspector** Gets **In Line** With the Sound Wave.

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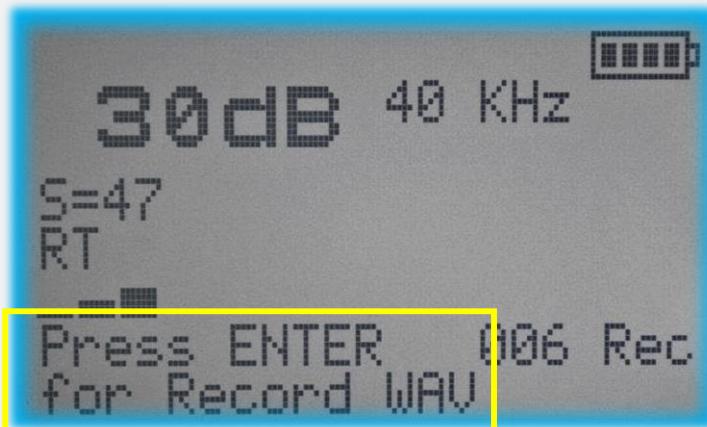
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INSPECTION PROCEDURE



When/If a **Potential Fault** is Identified, the Ultraprobe 10,000SD Comes With Independent **Sound Recording** Capacity to Support **Analysis**. To Record a Sound WAV File, Select **Record WAV** from the **Function Bar** at the Bottom of the Display. Press the Sensitivity Dial Until the Function Bar is **Flashing**. Spin to **Record WAV**, Then Press the **ENTER** Button.



When Recording **WAV Files**, Ensure **Accurate** Recording Parameters, (2 - 4 Bars) Within the **Intensity Meter**. This Supports a **Systematic**, Quality **Inspection** and **Analysis** Practice. To **Begin Recording**, Follow the **Step By Step Instructions** Within the Display. Once Completed Store the Data to the **SD Card** for Future **Review** and **Analysis**.

NOTE: For Full Details on Recording Sound WAV Files, See Visual Instruction: Recording WAV Files.

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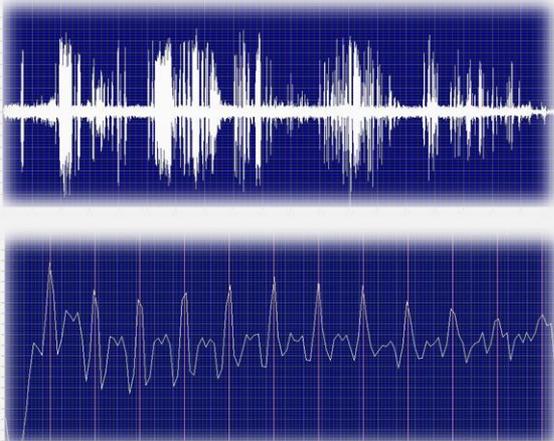
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SUPPORTIVE SOFTWARE



For Program **Support**, Download the **Spectralyzer Software** From UESystems.com. Once Downloaded, **Visual** Examinations of Recorded Sound WAV Files Allows for **Fault Identification** and **Severity Assessments**. Inspectors Can Look for the Visual **Clues** Indicating Which Detected Fault is **Present** Within Inspected Equipment.

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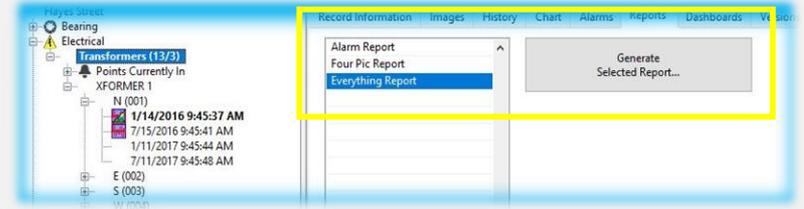
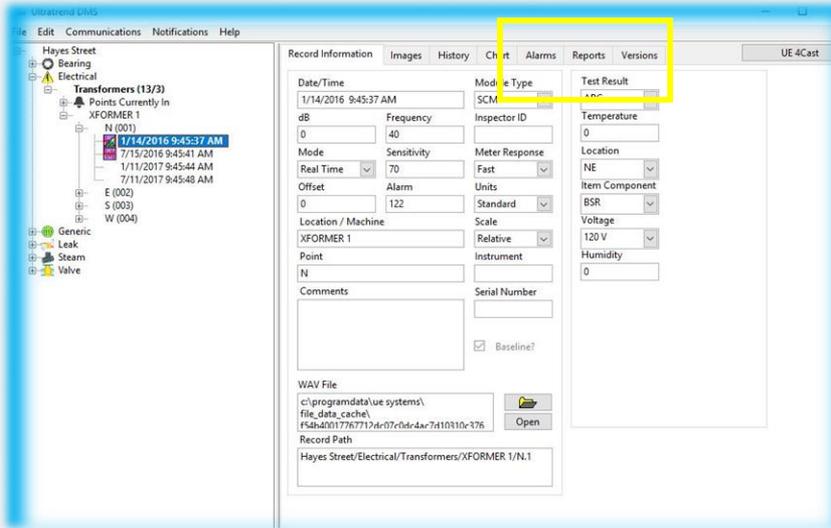
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SUPPORTIVE SOFTWARE



Plant Name	Group	Application Type	Group Name	Location Number	Location Name	Point Number	Point Name
Hayes Street	Electrical	Transformers	1	XFORMER 1	1	N	
Hayes Street	Electrical	Transformers	1	XFORMER 1	1	N	
Hayes Street	Electrical	Transformers	1	XFORMER 1	1	N	
Hayes Street	Electrical	Transformers	1	XFORMER 1	1	N	
Hayes Street	Electrical	Transformers	1	XFORMER 1	2	E	
Hayes Street	Electrical	Transformers	1	XFORMER 1	2	E	
Hayes Street	Electrical	Transformers	1	XFORMER 1	2	E	
Hayes Street	Electrical	Transformers	1	XFORMER 1	2	E	
Hayes Street	Electrical	Transformers	1	XFORMER 1	3	S	
Hayes Street	Electrical	Transformers	1	XFORMER 1	3	S	
Hayes Street	Electrical	Transformers	1	XFORMER 1	3	S	
Hayes Street	Electrical	Transformers	1	XFORMER 1	3	S	
Hayes Street	Electrical	Transformers	1	XFORMER 1	4	W	
Hayes Street	Electrical	Transformers	1	XFORMER 1	4	W	
Hayes Street	Electrical	Transformers	1	XFORMER 1	4	W	
Hayes Street	Electrical	Transformers	1	XFORMER 1	4	W	



The Ultratrend DMS Software Promotes Communication of Findings With **Data Storage** and **Report Generation**. From the **Reports** Tab, Select the Desired Electrical Report, Then Select “**Generate Selected Report**”. All Reports are in **Excel** Formatting.

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