



# UE SYSTEMS INC. THE ULTRAPROBE 10,000 MANUAL

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# START

## OVERVIEW

### INTRODUCTION

Your Ultraprobe 10000 is a versatile instrument with many features that will make your inspections easy, fast and accurate. As with any new instrument, it is important to review this manual before you begin inspections.

While simple to use as a basic inspection tool, there are many powerful features that when understood, will open a world of opportunities for inspection and data analysis.

### ULTRAPROBE® 10,000 KIT





## COMPONENTS

### PLUG-IN MODULES

**TRISONIC™ SCANNING MODULE.** This module is utilized to receive air-borne ultrasound such as the ultrasounds emitted by pressure/vacuum leaks and electrical discharges. There are four prongs at the rear of the module. For placement, align the prongs with the four corresponding jacks in the front end of the pistol housing and plug in. The Trisonic™ Scanning Module has a phased array of three piezoelectric transducers to pick up the airborne ultrasound. This phased array focuses the ultrasound on one "hot spot" for directionality and effectively intensifies the signal so that minute ultrasonic emissions can be detected.



**STETHOSCOPE (CONTACT) MODULE.** This is the module with the metal rod. This rod is utilized as a "waveguide" in that it is sensitive to ultrasound that is generated internally such as within a pipe, bearing housing or steam trap. Once stimulated by ultrasound, it transfers the signal to a piezoelectric transducer located directly in the module housing. The module is shielded to provide protection from stray RF waves that have a tendency to effect electronic receiving and measurement. The Stethoscope (Contact) Module can be effectively utilized in practically any environment ranging from airports to broadcasting towers. It is equipped with low noise amplification to allow for a clear, intelligible signal to be received and interpreted. For placement align the four prongs on the back with the corresponding receptacles in the front of the pistol and plug in.





**LRM (LONG RANGE MODULE).** A cone shaped scanning module that increases the detection distance above standard scanning modules. The LRM-15 is ideal for high voltage inspection and for locating leaks at great distances.



**REMOTE MAGNETIC TRANSDUCER.** The RMT is a magnetically mountable contact probe with cable. The probe is applied to a test surface and the RAM (Remote Access Module) is plugged into the front end of the Ultraprobe.

## PISTOL-GRIP HOUSING

**DISPLAY PANEL.** In the Operation Mode, the Display Panel will show inspection parameters such as intensity levels (as dB and as a bar graph), Frequency, Battery Level, Sensitivity Level, Sensitivity Value, "Display Mode" and Function Select Field. Intensity levels are shown simultaneously as a numeric dB value and on a sixteen-segmented bar graph (with each segment representing 3 dB). The Frequency is adjustable from 20 kHz to 100 kHz. These represent the range of frequency selection capable with the Ultraprobe. The most common frequency used for general leak detection or electrical inspection is 40 kHz. These frequencies may be "tuned in" when performing inspections with any of the Ultraprobe's plug-in modules. The Display Mode indicates the operation mode of the instrument. This is indicated on the display panel as **RT** for **Real Time**, **PH** for **Peak Hold**, **SS** for **Snap Shot**, or **RTO** for **Real Time "Offset"**, **PHO** for **Peak Hold "Offset"** and **SSO** for **Snap Shot "Offset"**. (For additional information about Offset see **dB Scale Select** in the Set-Up Mode Section.



Display Panel

Sensitivity Control Dial

Yellow Enter Button

**TRIGGER ON/OFF TRIGGER SWITCH.** The Ultraprobe is always "off" until the trigger switch is pulled. To operate, pull and hold the trigger. To turn the instrument off, release the trigger. The time it

takes for the instrument to turn off after release of the trigger can be set in the Set Turn-Off Time mode described later.

**NOTE:** *To save the battery charge, if the instrument is set in the "Trigger Shut Off Mode (Setup Menu 17), it will automatically turn off after approximately 1 second to 999 Seconds (time can be adjusted in Setup menu 18)*

**QUICK CHANGE BATTERY.** To insert the battery, align the battery with the handle (arrow pointing towards the trigger) and push in until the clips snap in place. To remove the battery, push firmly on the battery clips with the fingers of one hand while holding your other hand under the handle to catch the released battery.

**BATTERY.** This Ultraprobe uses a lithium ion battery with no memory problems. A full charge will take about 4 hours; however, you may charge the unit at any time for short intervals or for a longer period. If it is kept on charge over 4 hours, there will be no harm to the battery.

**NOTE:** *When the effective battery charge is used up the instrument shuts down and a message to recharge the battery will be displayed in the display panel.*



**WRIST STRAP.** To protect the instrument, against being dropped accidentally, use the wrist strap.

**SENSITIVITY CONTROL DIAL.** This is one of the most important controls in the unit. In the operation mode, it can be used to adjust the sensitivity. When clicked, or spun, it can be used to scroll around the screen or to select operation categories or change frequency. In the Setup Mode, it moves the cursor and by clicking, it sets notations.

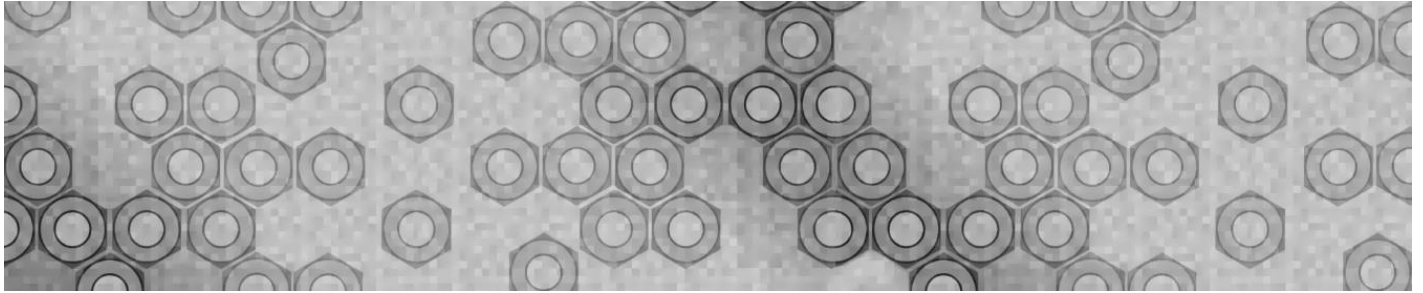
**YELLOW ENTER BUTTON.** This yellow button is used to enter and exit the various operations such as set up mode, text editor, store data or record WAV files.

**HEAD SET JACK.** This is where you plug in the headset. Be sure to plug it in firmly until it clicks. This can also be used as an output for a vibration analyzer or notebook computer when used with a proper microphone to BNC connector.

**RECHARGE JACK.** This Jack receives the plug from the recharger. The recharger is designed to plug into a standard electrical receptacle.



**LINE INPUT.** This Input is designed to receive signals from other instruments such as Temperature readings from infrared thermometers. The Instrument will display the readings on the Display Panel.



## ACCESSORIES

### OPTIONAL ACCESSORIES

**CFM-10.** The “Close Focus” scanning module is used for close proximity, low level leak detection in pressure and vacuum systems.



**UWC-10.** The UWC-10, Ultrasonic Waveform Concentrator, substantially increases the detection distance. The UWC-15 is great for corona, tracking and arc detection at safe distances. Includes carrying case.

**DHC-2.** Headphone is for Standard Applications that do not require the use of a hard hat.



**TFSM. Telescoping Flexible Scanning Module.**

A flexible scanning probe that is bent to accommodate odd scanning angles. The telescoping action helps scan hard to reach areas.



**TFCM: Telescoping Stethoscope (Contact) Module.** A contact probe for structure borne inspection that can be extended for hard to reach areas.



**UFMTG-1991.** The UFMTG 1991 is a multi-directional warble tone generator. It has a high-power output with a circular transmission pattern of 360 degrees.



**BCH-WTG.** Optional 220 VAC @ 50 Hz chargers for all Warble Tone Generators. The line input is 220 VAC @ 50Hz and the charging time is about 8 hours.

**HTS-10.** Holster set for the UP10,000.



## USERS INSTRUCTIONS

### TRISONIC™ SCANNING MODULE

- This module plugs into the front end of the instrument.
- Align the pins located at the rear of the module with the four jacks in the front end of the Metered Pistol Housing (MPH) and plug in.
- For general use position the frequency selection to 40 kHz.
- Start to scan the test area.

### METHOD OF AIRBORNE DETECTION

The method of air borne detection is to go from the "gross to the fine". Start at maximum sensitivity ( $S=70$ ), constantly reducing the sensitivity and following the bar graph amplitude display to the loudest point. If there is too much ultrasound in the area, reduce the sensitivity, place the RUBBER FOCUSING PROBE (described below) over the scanning module and proceed. Every time the sound level rises to a point where it is difficult to follow, reduce the sensitivity again and again until you are able to follow the test sound to its' loudest point.

### HEADSET

The DHC-HH headphones are designed to be worn with hard hats. To use, simply plug the headset cord into the headset Jack on the pistol housing and place the headphones over your ears.

### RUBBER FOCUSING PROBE

To use, slip it over the front of the scanning module or the contact module.

**NOTE:** *To prevent damage to the module plugs, always remove the module BEFORE attaching and/or removing the Rubber Focusing Probe.*

## STETHOSCOPE MODULE

- Align the pins located at the rear of the module with the four jacks in the front end of the Metered Pistol Housing (MPH) and plug in.
- Touch test area.

As with the SCANNING MODULE, go from the "gross" to the "fine". Start at maximum sensitivity (S=70) on the Sensitivity Selection dial and proceed to reduce the sensitivity until a satisfactory sound level is achieved. At times, it may be necessary to utilize the STETHOSCOPE MODULE with the sensitivity level at or near maximum. Occasionally when in this situation stray ultrasound may interfere with clear reception and be confusing. If this occurs, place the RUBBER FOCUSING PROBE over the Stethoscope probe to insulate against the stray ultrasound.

## STETHOSCOPE EXTENSION KIT

- Remove the Stethoscope Module from the Metered Pistol Housing.
- Unscrew the metal rod in the Stethoscope Module.
- Look at the thread of the rod you just unscrewed and locate a rod in the kit that has the same size thread - this is the "base piece".
- Screw the Base Piece into the Stethoscope Module.
- If all 31" (78.7 cm) are to be utilized, locate the middle piece. (This is the rod with a female fitting at one end) and screw this piece into the base piece.
- Screw third "end piece" into middle piece.
- If a shorter length is desired, omit step 5 and screw "end piece" into "base piece".

## TO CHARGE THE UP10000

- Plug recharger cable into recharger jack on the UP10000 and then plug the recharger into a wall receptacle.
- Make sure that the LED on the charger is blinking when recharging.
- The LED remains solid when the battery is charged. The instrument may stay connected to the charger without damaging the battery. Charge time is approximately 4 hours.

**WARNING:** Use the supplied UE Systems recharger (BCH-10L) only. Use of unauthorized rechargers will void the warranty and may degrade or damage the battery.

## WARBLE TONE GENERATOR (UE WTG 1)

- Turn Tone Generator on by selecting either "LOW" for a low amplitude signal (usually recommended for small containers) or "HIGH" for high amplitude.
- When the Tone Generator is on, a red light (located below the recharge jack in the front) flickers.
- To test the condition of the Warble Tone Generator battery, set to the LOW INTENSITY position and listen to the sound through the Ultraprobe at 40 kHz. A continuous warbling sound should be heard. If a "beeping" is heard instead, then a full recharge of the Warble Tone Generator is indicated.

## TO CHARGE THE WARBLE TONE GENERATOR

- Plug the Tone Generator plug (yellow) on the Warble Tone Generator and then plug the recharger into an electric outlet.
- Make sure that the red LED on the charger is lit when recharging.
- The LED turns OFF when the battery is charged.

## HELPFUL HINTS

Before you begin your inspection activities, it is suggested that you review the applications section to become familiar with the basic inspection methods.

Here are some helpful hints that should prove useful in some difficult situations.

### SD CARD OPERATION

- If the SD card is removed without turning the instrument off; to prevent data from being lost, immediately reinsert the same SD card.
- If the SD card is removed and replaced with a different SD card while the unit is still on, the data will be written directly onto the new SD card overwriting any data that has been previously placed on that SD card.
- If the instrument is turned off without reinserting an SD card all data will be lost.
- If there is no SD card inserted into the Ultraprobe, no data will be stored.

### IF YOU CAN'T READ YOUR DISPLAY PANEL WHILE TESTING

- Trigger-release-Trigger method: Take the reading while holding the trigger in. Immediately release the trigger and the reading will be set. Once the trigger is pulled again, the instrument will return to normal operation.

**NOTE:** This operation can only be performed when the instrument SHUTOFF mode is set at TIMED.

**Snap Shot Method:** If you know you are going to be in a situation where you won't be able to read the display panel, go into Setup Mode and spin to Display Mode (Menu 09). Select Snap Shot and return to Operation Mode. This will hold your reading even while you continue to hold the trigger in. For a quick grab, take a reading, press the trigger in to hold it. For an update or new reading, simply release and press the trigger switch.

## AUTO-SHUTDOWN BATTERY FEATURE

The Ultraprobe 10000 is equipped with an auto-shutdown feature, which enables the instrument to provide accurate measurement throughout the effective battery charge. If the Ultraprobe 10000 goes into the auto-shutdown mode, a message in the Display Panel will read "RECHARGE BATTERY", no sound will be heard in the headphones and measurements will not be displayed on the display panel. To restore the Ultraprobe 10000 to its' normal operating mode, recharge the instrument using the BCH-10L Battery Charger (BCH-10L2 for 220 V operation). If the SD Card is installed, on power-down a prompt will appear stating that it is "writing records" to the card. No previously stored data will be lost.

## RESETTING THE ON BOARD COMPUTER

For security purposes, there is no reset switch on the instrument. Should it be necessary to reset the instrument, enter SETUP Mode and spin to DEFAULT SETTINGS (Menu 12) and choose the YES prompt to re-set to factory default settings.

**WARNING:** Selecting Default Settings erases all records stored in the instrument.



# OPERATIONAL OVERVIEW

The Ultraprobe 10,000 is an ultrasonic inspection information, storage, sound event recording and retrieval system in a pistol housing. There are two modes that are important to understand:

## OPERATION MODE

The operation mode will be described in detail under the operation mode section. In this mode, you will perform all inspection actions such as scanning, probing, "Click and Spin" activities, sound recording and data storage.

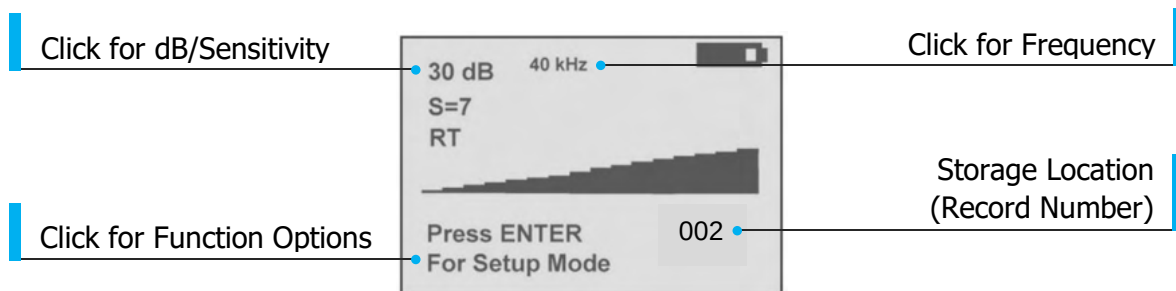
**NOTE:** "Click" operations require pressing a dial. "Spin" operations require turning a dial.

## SET UP MENU

The setup mode will be described in detail under the Setup Mode section. There are 32 menu options that will be described in that section. To use the set-up mode, you must "click" to the bottom of the display column, "spin" to "setup mode" and press the yellow button labeled "enter". For more details, see the SETUP Mode section.

## MAIN DISPLAY NAVIGATION

Moving around the Display Panel is easy. Basically, three clicks of the Sensitivity Dial will move the cursor on the Display Panel to three key spots: The Decibel Indicator, the Frequency Indicator and the Function Selection Indicator. When an indicator is selected, or "active", it will blink. When the cursor is moved to the Decibel Indicator and the Decibel Indicator is blinking, the Sensitivity Dial may be spun (rotated) clockwise or counter clockwise to adjust the sensitivity/volume of the instrument. When the cursor is moved to the Frequency Indicator and the Frequency Indicator is blinking, the Sensitivity Dial may be spun to change the frequency. When blinking, the Function Selection, located on the bottom of the screen can be changed by spinning the Sensitivity Dial up or down to select a specific feature which may be entered by pressing the YELLOW Enter Button.



## MAIN DISPLAY INFORMATION

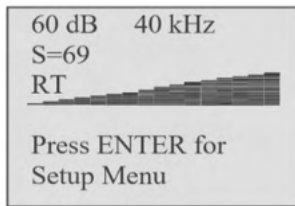
When the trigger is pressed and held to turn the instrument on, the Display Panel will display intensity levels simultaneously on a bar graph and as a numerical decibel value. The current selected frequency will also be shown. Remaining Battery Charge is shown in the upper right corner. Immediately under the dB reading is the Sensitivity value which may be used as a reference for comparing readings or for specialized trending purposes. The letters **RT**, **SS** or **PK** note the current display mode. **RT** indicates that the instrument is running in "**Real Time**", **SS** indicates "**Snap Shot**" and **PK** indicates "**Peak Hold**". Should the instrument be set in the Offset Mode, then the letters **RO**, **SO** and **PO** will be displayed. Along the bottom right you will see the record number (identified as 001-399 Rec). On the bottom line of the display panel, you will find the Function Select Indicator: "**Press Enter for:**" (you can use this to select any of the following function fields.)

The default function fields are:

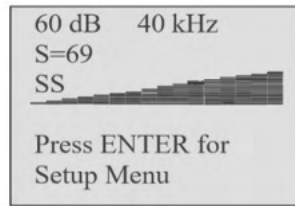
- **Setup Menu:** The various screen and operation functions can be set in this mode
- **Text Editor (ON/OFF):** When on, text notations can be set using up to 16 alphanumeric characters.
- **Alarm (DISABLED/ENABLED):** Set (enable) alarm levels in dB or turn the alarm off (disable).
- **Generic Info:** This function provides inspection information. It can also be set to display specific application information (for example: Leak Info, Bearing Info, Steam Info, Electric Info, Valve Info)
- **Storage Display:** The display panel will split in half. The top half will show current test data while the bottom will display stored information.
- **Record WAV:** The Ultraprobe 10000 is configured to record heterodyned ultrasounds with this function setting.
- **SD Info:** Information of stored data, recorded WAV files can be viewed here.
- **Store Record:** Use this function to store inspection data. This is a quick way to data log if inspection data is to be saved without viewing previously stored data (as in Storage Display).
- **Exit:** Press the yellow ENTER Button and you will EXIT back to Operation Mode.

## BAR GRAPH DISPLAY

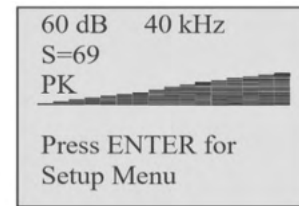
The bar graph has 16 segments. This indicates the intensity of the sound.



**Real Time = RT**



**Snap Shot = SS**



**Peak Hold = PK**

## SENSITIVITY CONTROL DIAL

This is the main control dial. It will function as a cursor control as well as a sensitivity and frequency controller.

### TO ADJUST THE SENSITIVITY/VOLUME

- Look at the meter. To adjust the sensitivity, the S= indicator must blink. The kHz (frequency indicator) must be steady (not blinking).
- If the frequency indicator is blinking, click in the Sensitivity Control Dial until the frequency indicator is steady and the
- S = indicator blinks. This indicates that you are now able to adjust the sensitivity.
- Once in the Sensitivity mode, turn the Sensitivity Control Dial clockwise to increase the sensitivity and counter clockwise to decrease the sensitivity.
- The Sensitivity Control Dial increases/decreases the sensitivity of the instrument simultaneously with the sound level in the headphones. When in range, it moves the bar graph up and down and will adjust the headset volume.

**NOTE:** *The instrument needs to be in range for accurate testing.*

**If the sensitivity is too low**, a blinking arrow pointing to the right will appear and there will be no numeric dB value visible in the display panel. If this occurs, increase the sensitivity until the arrow disappears (in low level sound environments the arrow will blink continuously, and it will not be possible to achieve a dB indication until a higher intensity sound level is sensed).

**If the sensitivity is too high**, a blinking arrow pointing to the left will appear and there will be no numeric dB value visible on the display panel. Reduce the sensitivity until the arrow disappears and the numeric dB value is shown.

**NOTE:** *The blinking arrow indicates the direction in which the Sensitivity Control Dial is to be turned.*

## TO ADJUST THE FREQUENCY

- Look at the meter. The kHz indicator must blink to be able to tune the frequency.
- If it is not blinking, "Click" in the Sensitivity Control Dial until the kHz indicator blinks.
- When the kHz indicator blinks, change the frequency by rotating the Sensitivity Control Dial up (clockwise) or down (counter clockwise).

## FUNCTION FIELD DESCRIPTION

- **SETUP MENU:** The various screen and operation functions can be set in this mode
- **TEXT EDITOR (ON/OFF):** When on, text notations can be set using up to 16 alphanumeric characters.
- **ALARM (DISABLED/ENABLED):** Set (enable) alarm levels in dB or turn the alarm off (disable).
- **GENERIC INFO:** This function provides inspection information. It can also be set to display specific application information (for example: Leak Info, Bearing Info, Steam Info, Electric Info, Valve Info)
- **STORAGE DISPLAY:** The display panel will split in half. The top half will show current test data while the bottom will display stored information and baseline data.
- **RECORD WAV:** The Ultraprobe 10,000 is configured to record heterodyned ultrasounds with this function setting.
- **SD INFO:** Information of stored record and WAV files can be viewed here.
- **STORE RECORD:** Use this function to store inspection data. This is a quick way to data log if inspection data is to be saved without viewing previously stored data (as in Storage Display).
- **EXIT:** Press the yellow ENTER button and you will EXIT back to Operation Mode.

## YELLOW ENTER BUTTON

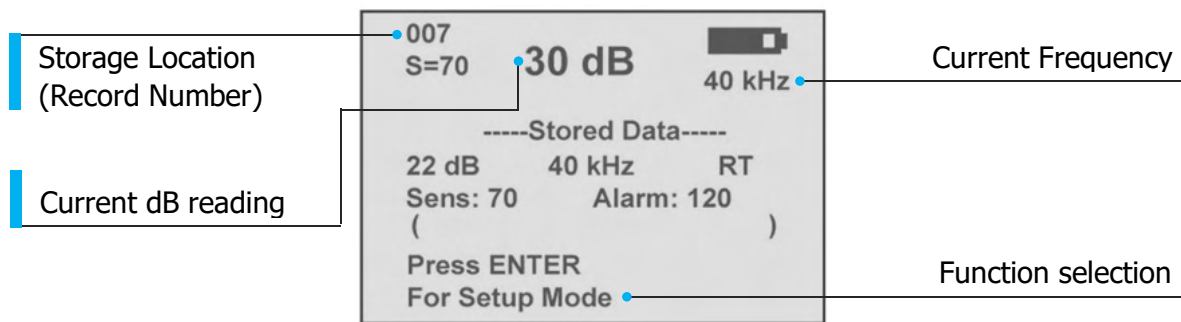
The Yellow Enter Button allows you to enter and exit specific menu operations. A message on the bottom of the Display Panel will note when to press this button.

## STORAGE DISPLAY NAVIGATION

Moving around the Display Panel is easy. Basically, four clicks (presses) of the Sensitivity Control Dial will move the cursor on the Display Panel to four key spots: the Decibel Indicator, the Frequency Indicator, Storage Location Indicator and the Function Selection Indicator. When an

indicator is selected, or “active”, it will blink. When the cursor is moved to the Decibel Indicator and the Decibel Indicator is blinking, it may be spun (rotated) clockwise or counter clockwise to adjust the sensitivity/volume of the instrument. When the cursor is moved to the Frequency Indicator and the Frequency Indicator is blinking, the Sensitivity Control Dial may be spun to change the frequency. The Storage Location (Record Number) can be changed up or down when it is blinking by spinning the Sensitivity Control Dial. When blinking, the Function Selection, located on the bottom of the screen can be changed by spinning the Sensitivity Control Dial up or down to select a specific feature which may be entered by pressing the Yellow Enter Button.

**NOTE:** *If a storage location has been used during a test run, it will be highlighted in black with white letters as shown:*



On the bottom line of the Display Panel, you will find the Function Select Indicator: “Press Enter for:” (you can use this to enter any of the following function fields).

The default function fields are:

- **EXIT MAIN:** Exits to main display.
- **EDIT TEXT:** When on text notations can be set using up to 16 alphanumeric characters.
- **MORE:** View additional test information including Date, Time and Module used.
- **PARAM INFO:** View or change inspection details. It can also be set in the Applications Select menu for specific application information such as Leak Info, Bearing Info, Steam Info, Electric Info, Valve Info)
- **RECORD WAV:** The Ultraprobe 10000 is configured to record heterodyned ultrasounds with this function setting.
- **SD INFO:** Information of stored record and WAV files can be viewed here.
- **STORE REC:** Use this function to store inspection data. This is a quick way to data log if inspection data is to be saved without viewing previously stored data (as in Storage Display).

**STORAGE DISPLAY INFORMATION.** When in the Storage Display mode, the basic inspection parameter information can be viewed and stored if desired. To view Parameter Information when in the Storage Display mode:

- “Click” the Sensitivity Control Dial until the “Press ENTER For” blinks.
- Spin to Param INFO and Press (Click) the Yellow ENTER Button to enter.
- The information display will read: “Test Results:” and “Temperature:”

### PARAMETER INFO (in Storage Display only)

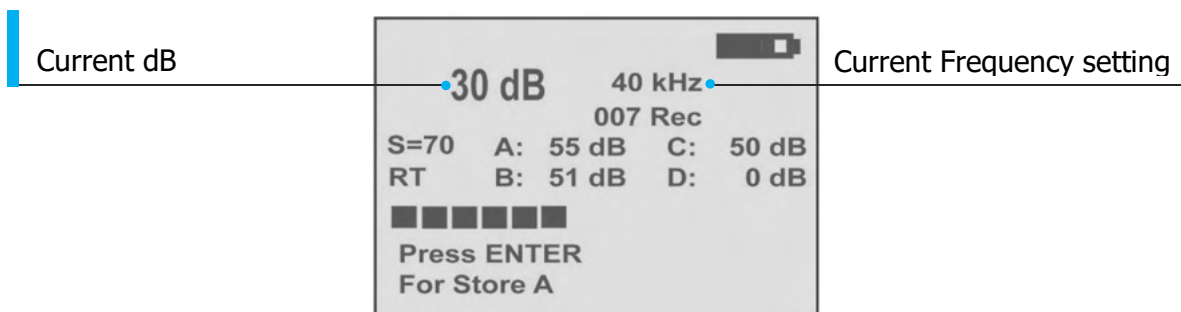
The Parameter Info screen displays the test data relevant to a selected application (ex: bearings, valves, leak & steam). This screen may be used to enter additional data such as test results or temperature. An extension of the Parameter Information screen is the MORE Function Selection. This will display additional inspection information: Date, Time, Module used and Offset Value (if an offset value has been set). See the APPLICATIONS section for details. Note: this is the same information as will be seen in the basic application information screens. i.e.: GENERIC INFO or BEARING INFO.

### ABCD NAVIGATION

**NOTE:** *The ABCD Display will only work if the "Valve" application has been enabled in the Setup Mode.*

This is described in SETUP, “Menu 03 Application Select”. To select the ABCD Screen, after the Valve Application has been selected, Select Menu 02, Display Screens in the Setup Mode and spin to ABCD.

Moving around the Display Panel is easy. Three clicks (presses) of the Sensitivity Control Dial will move the cursor on the Display Panel to three key spots: the Decibel Indicator, the Frequency Indicator, and the Function Selection Indicator. When an indicator is selected, or “active”, it will blink. When the cursor is moved to the Decibel Indicator and the Decibel Indicator is blinking, it may be spun (rotated) clockwise or counter clockwise to adjust the sensitivity/volume of the instrument. When the cursor is moved to the Frequency Indicator and the Frequency Indicator is blinking, the Sensitivity Control Dial may be spun to change the frequency. When blinking, the Function Selection, located on the bottom of the screen can be changed by spinning the Sensitivity Control Dial up or down to select a specific feature which may be entered by pressing the Yellow Enter Button. Each A, B, C and D dB entry will be stored separately by pressing the Yellow ENTER button to store.



On the bottom line of the display panel, you will find the Function Select Indicator: "Press Enter for:" (you can use this to enter any of the following default fields). The default function fields are:

- |                         |                             |
|-------------------------|-----------------------------|
| a. STORE (A)            | g. ALARM (DISABLED ENABLED) |
| b. STORE (B)            | h. VALVE INFO               |
| c. STORE (C)            | i. STORAGE DISPLAY          |
| d. STORE (D)            | j. RECORD WAV               |
| e. SETUP MENU           | k. SD INFO (SD Card)        |
| f. TEXT EDITOR (ON/OFF) | l. STORE RECORD AND EXIT    |

## HOW TO USE THE OPERATIONAL FEATURES

**TO ENTER A TEST CONDITION IN STORAGE DISPLAY.** Spin to Test, the condition default is OK and will blink slowly.

**If it is necessary to change the test condition:**

- Click with the Sensitivity Control Dial and the condition (OK) will blink rapidly.
- Spin to select a condition indication. The choices are; OK, BAD, NE, CHK (for check). It is also possible to customize the results codes for other conditions. These codes can be changed in the Ultratrend DMS software and uploaded to the Ultraprobe.
- To Set, Click the Sensitivity Control Dial (the condition will blink slowly).
- Spin to Temperature should a Temperature entry be desired.
- Click on the Temperature setting (it will blink rapidly)  
For example, if you are looking to enter a reading of 250; Spin to the left to select the value of "200" and to the Right to select the value of 50).
- Click to set.
- Press Enter to store the information or Spin to EXIT and click to exit.

|                      |           |
|----------------------|-----------|
| 001                  | 43dB      |
| S=33                 | 30 KHz    |
| ----STORED DATA----  |           |
| 62 dB                | 30 kHz RT |
| Sens: 69             | Alarm: 84 |
| ENTER for Param INFO |           |

|                    |  |
|--------------------|--|
| GENERIC            |  |
| 001                |  |
| TEST RESULTS: OK   |  |
| TEMPERATURE: 150 F |  |



Additional information can be viewed by clicking the Sensitivity Control Dial until the ENTER for Blinks. Spin to MORE and press the Yellow Enter Button to enter.

There you will see the following information represented as an example on the right.

DATE: 01/01/03  
TIME 08:30:43  
Module Type: SCM  
Offset: 00 dB  
Press ENTER to STORE  
Press Sens. to Exit

## ENTERING TEXT USING TEXT EDITOR

### TO ENTER TEXT IN THE TEXT FIELD.

- There is space to enter 16 characters of alphanumeric text.
- To enter text, the Text Edit feature must be set to ON (refer to SET UP MODE 08). If text is ON, click the Sensitivity Control Dial to the bottom of the Display Panel until Press ENTER for is blinking. Spin to Edit Text and press Enter.
- The text icon will blink. If the field has no entry, the screen will be blank.
- The Sensitivity Control Dial can be used to scroll through the alphabet, A-Z, a space character and then through numbers 0-9.
- Move back through numbers (9-0) and then back down the alphabet (Z-A).
- Spin the Sensitivity Dial clockwise to move up through numbers and then through the alphabet starting with A or spin counter clockwise to move back through numbers (9-0) and then back down the alphabet (Z-A).
- To enter a character, spin the Sensitivity Control Dial to the desired character and then click to move the cursor to the next of 16 positions.
- Continue until through or until all 16 fields are filled.
- If an error in recording a letter or number occurs, click the Sensitivity Control Dial and the cursor will move to the right. Continue clicking the Sensitivity Dial and the cursor will "wrap" around to the right until the desired location is reached. As explained above, spin the Sensitivity Dial until the corrected entry is displayed and "click" the Sensitivity Control Dial to enter the text character.
- When the text is correct, press the Yellow Enter Button to save and store the text. The instrument will return to the Operation Mode.

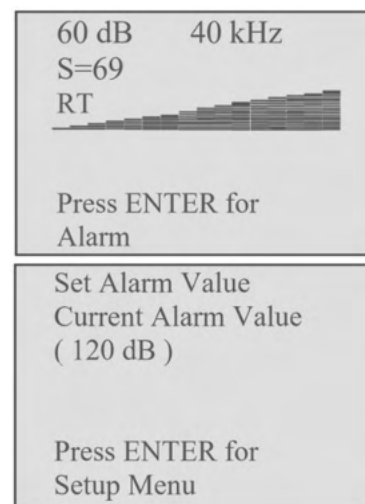
## ALARM ENABLE/DISABLE

While in the Operation mode, this function selection will display Alarm Disabled if no alarm level has been set. If an alarm level has been set, it will show the set level in dB. To enable the alarm, see ALARM ENABLE/DISABLE in the SETUP MODE below.

**WARNING:** If the alarm value is changed, the new dB alarm value is stored, and will overwrite the previous value.

The alarm dB level stored in the current record can be viewed in the main display. It can be changed. To do so:

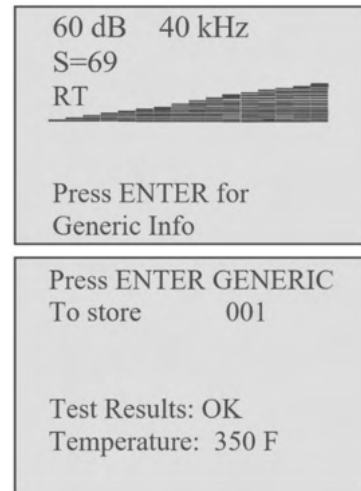
- Click down to the bottom of the Display Panel until "PRESS ENTER FOR" is blinking.
- Spin to Alarm (the dB value will be shown).
- Click to Enter.
- Spin to the desired dB alarm level.
- Press the Yellow ENTER Button to exit.



## GENERIC INFO

- To view Generic Info, click the Sensitivity Control Dial to the bottom of the Display Panel until "Press ENTER For" is blinking. Spin to Generic Info and press Enter.
- To enter a test condition: Spin to Test the condition default is OK and will blink slowly. If it is necessary to change:
- Click with the Sensitivity Control Dial and the condition (OK) will blink rapidly.
- Spin to select a condition indication. The choices are; OK, CHK and it is also possible to customize the results codes for other conditions. These codes can be changed in the Ultratrend software and uploaded to the Ultraprobe.

- To Set, Click the Sensitivity Control Dial (the condition will blink slowly)
- Spin to Temperature should a Temperature entry be desired
- Click on the Temperature setting (it will blink rapidly)  
Spin to the left to select a "100" reading (ex 200, 300) and to the Right to select a "tens" reading (ex: 50)
- Click to set
- Press Enter to store the information or
- Spin to EXIT and click to exit.



## RECORD WAV

To Record a WAV (sound file) click the Sensitivity Control Dial to the bottom of the Display Panel until "Press ENTER For" is blinking. Spin to Record WAV and press Enter.

Be sure the SD Card is inserted into the slot on the Ultraprobe and keep the Trigger Switch pulled on (or set the Timed Off mode as described in Setup Menu 16 and 17 to shut off at a pre-determined time, ex: 30 seconds.) or set to Trigger Off mode (see setup mode 17 Shut Off Mode).

- When ready to record, click the Sensitivity Dial and Hold it in for the duration of time you wish to record (Maximum record time is 60 seconds).
- When through, release the Sensitivity Control Dial.
- You can preset the time of recording in Setup Menu 7 for: Manual (as above), 5, 10, 15, 20, 25, or 30 seconds.
- Press Enter to playback/review the sound you have recorded.
- Press Sensitivity Control Dial to Continue on to the next screen.
- Press Enter to Save the recording or if you do not wish to save the recording, press Sensitivity Control Dial to Exit.

## SD INFO

This feature allows you to view file records stored on the SD Card. When a record is stored or a sound is recorded and a WAV file is saved, two files are written to the SD Card and stored to the associated record number: a text file which contains all stored record fields and the WAV file. When SD info is selected, 5 selections will be viewed on the screen. You may click the Sensitivity Dial to select/enter any of these.

- Free Space & Info (This will display the number of Bytes Free and the Remaining Recording time on the card).
- Display Files (The files stored on the SD card)
- Delete Files
  - To delete a file:**
    - Click to enter, the File Number will blink.
    - Press Sens to DELETE or Spin to the next file (the file you wish to delete).
    - If you don't want to delete a file, press ENTER to exit.
- Play SD WAV file: plays the stored WAV file.

**WARNING:** Never remove or insert the SD Card with the instrument turned on.

## TO STORE A READING

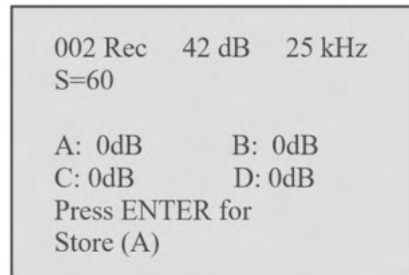
- Continue to "Click" the Sensitivity Control Dial to move the indicator to the bottom of the meter until PRESS ENTER FOR: is blinking. Then Spin the dial until STORE Record is displayed. Press the Yellow Enter Button. This puts the instrument in the Data Storage mode. In the data storage mode the Display Panel changes.
- The screen will display the following: Save to Record (the current record number is displayed, (for example 003) (This allows you to determine whether to store the information in this record location or to change the location.) Turn SENS.: Change (If you want to change the store location this prompts you to turn (Spin) the Sensitivity Control Dial to change the location). Press the Sensitivity Control Dial to EXIT (If you do not wish to store the information, Click the Sensitivity Control Dial to return to operation mode) Click (Press) Enter to Store (If you want to store the information, Click Enter, a screen will pop up to confirm the information has been stored.

- To view previously stored information, click the Sensitivity Control Dial to the bottom of the Display Panel until "PRESS ENTER FOR" is blinking and spin to Storage Display. Press Enter to view the stored data. To view information in other storage locations, click the Sensitivity Control Dial until the storage number blinks. The storage number in the Storage Display mode is located in the upper left corner. Spin the Sensitivity Control Dial to the desired storage location.
- If you wish to view all stored information during inspections, you may set the screen to Storage Display.
- 1. Click the Sensitivity Control Dial until "PRESS ENTER FOR" is blinking. 2. If Storage Display is not shown, spin until Storage Display is shown and blinking. 3. Press the Yellow Enter button. The Display Screen will be split. All inspection data will be displayed on the top half while the stored information will be displayed on the bottom half of the Display Screen.

## STORING ABCD INFORMATION

To Store information when the ABCD Function has been set:

- When Click ENTER for Store (A) is blinking, press ENTER.
- Then Click ENTER for Store (B) will then blink, press ENTER.
- Then Click ENTER for Store (C) will blink, press ENTER.
- Then Click ENTER for Store (D) will blink, press ENTER.
- The function will then shift to STORE DATA.
- Press ENTER and all four dB levels will be stored at the selected Record Number.



## FREEZING A READING ON THE DISPLAY PANEL

If in a test situation where it is difficult to view the display panel, the decibel reading can be frozen for viewing using the following steps:

1. You must be in the **Timed-Off Mode set at 5 seconds or longer**.
2. If using the Stethoscope Module, continue to touch the test point and then release the trigger. Remove the instrument and view the panel.

This must be performed within the set timed off period (ex: within 5 seconds if set for 5 seconds off). If in the scanning mode, point at target, release the trigger and view as described.

## SETUP MODE

There are 32 functions that can be set to either change the display screens or the format of data entry and collection.

|                                 |                                   |           |                             |
|---------------------------------|-----------------------------------|-----------|-----------------------------|
| <b>1</b>                        | Add/Remove SD Card                | <b>16</b> | Restore Lists               |
| <b>2</b>                        | Display Screens                   | <b>17</b> | Set Shut Off Mode           |
| <b>3</b>                        | Application Select                | <b>18</b> | Set Turn Off Time           |
| <b>4</b>                        | Module type select                | <b>19</b> | Display Response            |
| <b>5</b>                        | Instrument Setup (Manual or Auto) | <b>20</b> | Line Input Select           |
| <b>6</b>                        | Alarm Enable/Disable              | <b>21</b> | Sensitivity Mode            |
| <b>7</b>                        | Set Record Time                   | <b>22</b> | Headphone Volume            |
| <b>8</b>                        | Record WAV on Alarm               | <b>23</b> | Enter Inspector ID          |
| <b>9</b>                        | Select Function List              | <b>24</b> | Set time and Date           |
| <b>10</b>                       | Text Editor Select                | <b>25</b> | Date Format Select          |
| <b>11</b>                       | MORE (moves to second level)      | <b>26</b> | Cal Due Date                |
| <b>SECOND LEVEL SET UP MODE</b> |                                   | <b>27</b> | Standard or Metric Units    |
| <b>12</b>                       | Default Settings                  | <b>28</b> | Display Mode Select         |
| <b>13</b>                       | User Sensitivity Default          | <b>29</b> | dB Scale Type Select        |
| <b>14</b>                       | User Frequency Default            | <b>30</b> | dB Offset Value             |
| <b>15</b>                       | Frequency Adjust (Yes or No)      | <b>31</b> | Upgrade UE10K PGM           |
|                                 |                                   | <b>32</b> | BACK (moves to first level) |

## HOW TO USE THE SETUP MENU

There are two ways to enter the Setup Menu:

### WHILE IN OPERATION MODE

- Click down to move the cursor to the bottom of the Display Screen until PRESS ENTER FOR is blinking.
- Spin to Setup Mode.
- Press the Yellow ENTER button.

### WHILE THE INSTRUMENT IS OFF

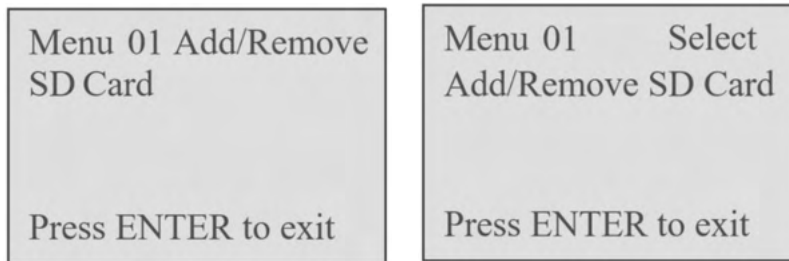
- Press both the Yellow ENTER button and the Sensitivity Control Dial at the same time. Only after these two controls have been pressed, then squeeze and hold the trigger.
- *NOTE: Hold the Trigger in during any of the Setup Mode operations.*
- When in the first Menu mode: Data Transfer, you may move to any of the other Menu modes by spinning the
- Sensitivity Dial up or down (clockwise or counter clockwise).
- When the desired Menu mode is reached, click the Sensitivity Control Dial in.
- You may Spin and Click to enter and exit any Menu mode in the Set Up mode as long as the trigger on/off switch is pressed.

## MENU 01: ADD/REMOVE SD CARD

- Be sure to insert the SD card before turning the Ultraprobe on. The Group data will be read by the Ultraprobe on power up.
- On power down (off), all data and WAV files are stored on the SD card.
- The Add/Remove Card function allows users to change the card while the unit is on.
- While the power is on, a warning will advise against removal (unless Menu 01 is selected)



- There is a risk of losing data if the SD card is removed without activating Menu 01.



## TO TRANSFER DATA FROM ULTRATREND TO THE ULTRAPROBE THROUGH THE SD CARD

- If the Ultraprobe is off, insert the SD card, then power up.
- If the Ultraprobe is on, enter Menu 01, select Add/Remove SD Card.
- Insert SD Card.
- Press the yellow Enter button to Exit.

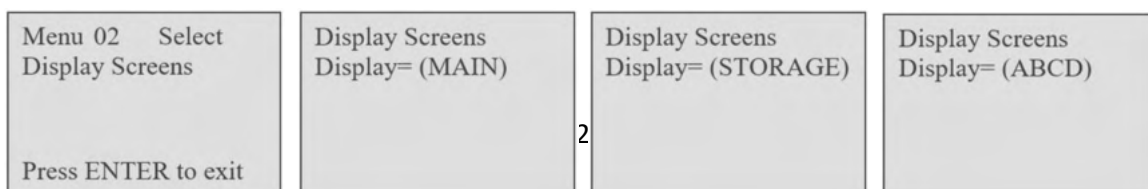
## MENU 02: DISPLAY SCREENS

There are two Display Screens to use when in the Operating Mode: Main and Storage. A third screen, ABCD indicator, is available when either the "Valves" or "Bearings" Application is selected.

The Main screen is the standard mode. It displays current inspection data: dB, frequency, battery status, sensitivity setting and Operation Mode (Real Time, Snap Shot or Peak Hold).

The Storage mode splits the screen so that the main menu information is displayed along with stored data for a selected storage location.

- Follow the steps to enter the Setup Mode as described earlier.
- Spin to Menu 02: Display Screens.
- Click the Sensitivity Control Dial to enter Display Screens.
- Spin the Sensitivity Control Dial to change from Main to Storage, (or to ABCD) then.
- Click the Sensitivity Control Dial to select.



## MENU 03: APPLICATION SELECT

In Application Select, choose the specific application you wish to use for your inspection. This will adjust the display panel and will save information in a format compatible with specialized Ultratrend software.

- Follow the steps to enter the Setup Mode as described earlier.
- Click the Sensitivity Control Dial to enter the Application Select menu.
- Spin to the application you wish to enable.
- Click the Sensitivity Control Dial to select.
- Press Enter.
- To change the operation mode to the newly selected Application, Click the Sensitivity Control Dial to change.

GENERIC ● enable  
VALVES ● disable

BEARINGS ● disable  
ELECTRICAL ● disable

STEAM ● disable  
LEAK ● disable

## MENU 04: MODULE TYPE SELECT

Your reports can reflect the module used for your inspection. You can choose: **SCM** (Scanning Module), **STM** (Stethoscope Module), **UWC** (The Parabolic Dish), **CFM** (Close Focus Module), **LRM** (Long Range Module), **FLEX** (Flexible probes), **RAS MT** (Magnetic mount probe), **RAS RAM** (Remote Access Sensor/Remote Access Module) or OTH (Other).

### TO SELECT A MODULE TYPE

- Follow the steps to enter the Setup Mode as described earlier.
- Spin to Menu 04: Module Type Select.
- Click to Enter.
- Spin to select a Module.
- Click to set.
- Press the Yellow ENTER button to exit.

Menu 04 Select  
Module Type Select

Press ENTER to Exit

Module Type Select  
Module = (STM)

## MENU 05: INSTRUMENT SETUP

There are two choices for Instrument Setup: **Manual and Auto**.

- Manual setting should be chosen when data is collected for the first time as it will collect your Frequency, Sensitivity, Module Type, Inspector and Alarms send the information back to the DMS.
- After the Baseline Data has been collected switch the unit to Automatic for future data collection. This will automatically set the unit to the Frequency, Sensitivity, Module, Inspector, and Alarms collected during the capture of the baseline data for future readings.

## MENU 06: ALARM ENABLE/DISABLE

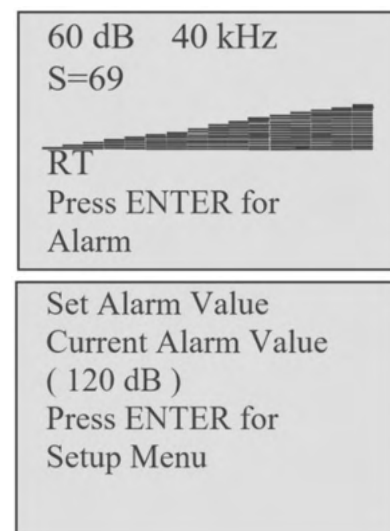
### TO ENABLE OR DISABLE THE ALARM

- Follow the steps to enter the Setup Mode as described earlier.
- Spin to Menu 05, Alarm Enable.
- Click the Sensitivity Control Dial to enter.
- Spin to select Enable or Disable.
- Click to set.

**THE ALARM DB LEVEL CAN BE SET WHEN  
ENABLE IS SELECTED AND THE INSTRUMENT  
IS IN THE OPERATION MODE.**

### TO DO SO:

- Click down to bottom of the meter until "PRESS ENTER FOR" is blinking.
- Spin to Alarm Enable.
- Click to Enter.
- Spin to the desired dB Alarm level.
- Press the Yellow ENTER button to exit.



## **MENU 07: SET RECORD TIME**

The recording time can be preset using this feature. The selections are: Manual (hold the sensitivity dial in for as long as you wish to record while recording) 5, 10, 15, 20, 25, 30 seconds.

### **TO SELECT A RECORDING TIME**

- Follow the steps to enter the Setup Mode as described earlier.
- Spin to Menu 07, Set Record Time.
- Click the Sensitivity Control Dial to enter.
- Spin to select manual or desired record time.
- Click to set.

## **MENU 08: RECORD WAV ON ALARM**

When an alarm level is exceeded during an inspection, the instrument will launch into the alarm mode and will use the preset record time modes as described above in Menu 07 Set Record Time.

- Follow the steps in Enter the Setup Mode as described earlier.
- Spin to Menu 08, Record WAV on Alarm.
- Click the Sensitivity Control Dial to enter.
- Spin to select YES or NO.

## **MENU 09: SELECT FUNCTION LIST**

The items selected from the function list will be displayed on the Function Bar of the Main Display panel or on the Storage Display during operation modes. You can select all or none. Be advised that if Setup Mode is turned off, when you return to the operation mode, it will not be displayed on the function bar. If there is a need to return to the setup mode, you will have to revert to option b in the "How to use setup mode" section explained above.

- Follow the steps in Enter the Setup Mode as described earlier.

- Spin to Menu 09, Select Function List.
- Click the Sensitivity Control Dial to enter.
- Select Main Menu List or Storage Menu list.
- Spin to the Function you wish to change (add or remove).
- The Function will default to YES, to deselect, Spin to NO.
- Click to set.

## MENU 10: TEXT EDITOR SELECT

Text Editor will enable or disable text entry during the operation mode. If text notes are to be manually entered, select the ON mode. If text has been preset in the Ultratrend™ software or if text entry is not needed, select OFF.

The Text Editor can be set by entering the Setup Mode.

- Spin to Text Editor.
- Click the Sensitivity Control Dial to enter the Text Editor Enable mode.
- Spin the Sensitivity Control Dial to select OFF or ON.
- Press the Yellow ENTER button to exit.



## MENU 11: MORE

This moves the setup menu into the next level: items 12 through 35.  
Click the Sensitivity Control Dial to move to the next level of Setup Menus.

## MENU 12: DEFAULT SETTINGS

This mode allows users to retain or to delete the information stored in the instrument.  
The instrument will re-set to original factory default settings. In addition, there are user

defined defaults that can be set when with this setup option. This will NOT delete data saved to the SD card.

**FACTORY DEFAULTS.** Confirm YES means that the onboard computer will default to original factory settings and all stored data will be deleted. Confirm NO retains all stored data and current instrument settings. This will NOT delete data saved to the SD card.

### THE FACTORY DEFAULT SETTINGS

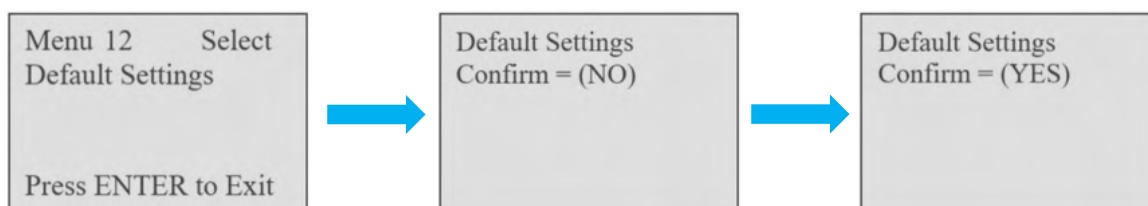
|                     |           |                    |           |
|---------------------|-----------|--------------------|-----------|
| Maximum Sensitivity | (S= 70)   | Text Editor        | ON        |
| Frequency           | 40 kHz    | Alarm              | Disabled  |
| Display Mode        | Real Time | Module Type Select | SCM       |
| Display Screen      | Main      | Display Response   | Medium    |
| Application Select  | Generic   | Sensitivity Mode   | Manual    |
| Instrument Setup    | Manual    | Headphone Volume   | 99%       |
| STD or Metric Units | STD       | Turnoff Time       | 5 Seconds |
| dB Scale            | Relative  | Shutoff Mode       | Timed     |
| Offset Value        | 0         |                    |           |

### THE USER DEFINED DEFAULT SETTINGS CAN BE

- User Sensitivity Default (see Setup Menu 13)
- User Frequency (see Setup Menu 14)
- Frequency Adjust (see Setup Menu 15)

### TO SELECT DEFAULT SETTINGS

- Follow the steps to enter the Setup Mode as described earlier.
- Spin to Menu 12: Default Settings.
- Click to Enter.
- Spin to "YES" or "NO".
- Click to set.
- Press the Yellow ENTER button to exit.



## **MENU 13: SENSITIVITY DEFAULT**

The user can select a default sensitivity level ranging from 0-70.

- Follow the steps to enter the Setup Mode as described earlier.
- Spin to Menu 13: Sensitivity Default.
- Click to Enter.
- Spin to selected sensitivity level.
- Click to set.
- Press the Yellow ENTER button to exit.

## **MENU 14: USER FREQUENCY DEFAULT**

This is the frequency to which the instrument will automatically default when turned on.

- Follow the steps to enter the Setup Mode as described earlier.
- Spin to Menu 14: Frequency Default.
- Click to Enter.
- Spin to desired frequency.
- Click to set.
- Press the Yellow ENTER button to exit.

## **MENU 15: FREQUENCY ADJUST**

Select YES to manually change frequency during operations. Select NO to fix a selected (default) frequency to be used during all inspections.

- Follow the steps to enter the Setup Mode as described earlier.
- Spin to Menu 15: Frequency Adjust.
- Click to Enter.
- Spin to YES or NO.
- Click to set.
- Press the Yellow ENTER button to exit.

## MENU 16: RESTORE LISTS

Selecting Restore Lists resets inspection codes to original factory set codes listed in Ultratrend DMS and in the Ultraprobe 10,000. This change will affect only the current information stored locally on the Ultraprobe and can be changed again when downloaded to Ultratrend DMS. YES, will restore the lists to the original factory lists, NO will retain current codes.

- Follow the steps to enter the Setup Mode as described earlier.
- to Menu 16: Restore Lists.
- Click to Enter.
- Spin Spin to YES or NO.
- Click to set.
- Press the Yellow ENTER button to exit.

## MENU 17: SET SHUTOFF MODE

### SHUTDOWN = TIMED TRIGGER

There are two selections to control how to turn the instrument off: Either by a Timed turn-off (as in Menu 16) or when the trigger is released: Trigger. In Trigger Mode, when the trigger is pressed to turn the Ultraprobe on, the instrument will stay on until the trigger is pulled a second time.

### TO SET THE SHUTOFF MODE

- Follow steps to enter the Setup Mode as described above.
- Spin to Menu 17: Set Shutoff Mode
- Click to Enter
- Spin to "Timed" or "Trigger"
- Click to set
- Press the Yellow ENTER button to exit.

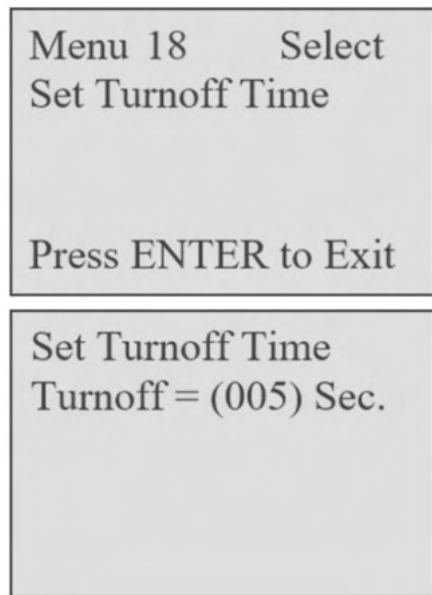
Menu 17 Select  
Set Shutoff Mode

Press ENTER to Exit

Set Shutoff Mode  
Shutoff = (Trigger)



## MENU 18: SET TURNOFF TIME



**TURN OFF RANGE IS 1-995 SECONDS;  
1HR., 2, 3, 4 HOURS: DEFAULT IS 5 SECONDS**

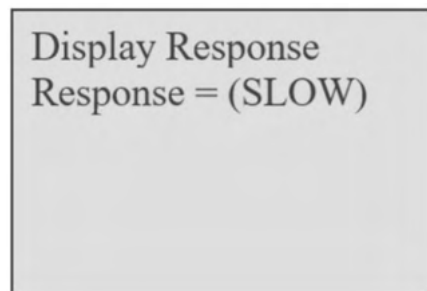
- Follow the steps to enter the Setup Mode as described earlier.
- Spin to Menu 18: Set Turn off Time
- Click to Enter
- Spin to the desired time (1 second- 4 hours)
- The Factory default is 5 Seconds.)
- Click to set
- Press the Yellow ENTER button to exit.

## MENU 19: DISPLAY RESPONSE

You can control the speed at which the bar graph moves and the meter responds to reflect a dB level. There are three choices: Slow, Medium, Fast. The instrument defaults to Slow.

### TO SELECT A RESPONSE SPEED

- Follow the steps to enter the Setup Mode as described earlier.
- Spin to Menu 20: Display Response.
- Click to Enter.
- Spin to select Slow, Medium or Fast.
- Click to set.
- Press the Yellow ENTER button to exit.



## MENU 20: LINE INPUT

With line input you can enter data such as Temperature from an external source. The source must have a DC millivolt output (1mV/degree).

## TO INPUT THE DATA

**NOTE:** *Do not connect any external source into Line Input jack at this point.*

- Enter Setup Mode
- Spin to Menu 20: "Line Input"
- Click the Sensitivity dial in to enter
- Disabled will blink, Spin to Temp Probe
- Click Sensitivity Dial to set; Press Enter to exit.

Line Input Select Line  
In=Disabled

Line Input Select Line  
In = Temp Probe

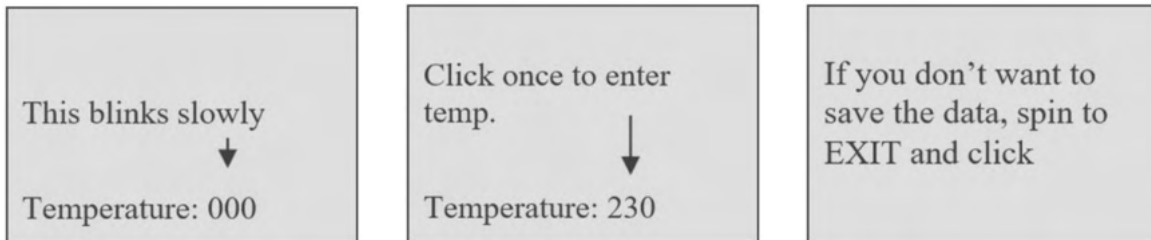
## WHEN READY TO ENTER TEMPERATURE

- Connect the cable from the Thermometer to the Ultraprobe Line Input jack.
- Click the Sensitivity Dial until the cursor moves to the bottom of the Display Panel until Press ENTER for is blinking.
- Spin until the specific Application info is blinking (e.g.: Generic or Steam).
- Press Enter to enter the Application info screen.
- Spin to Temperature.
- Turn on the Thermometer and take the temperature measurement and hold the reading.
- Click (the temperature numerals will blink rapidly) and the data will be entered.
- (Optional) Click to re-enter the data.
- Press Enter to save: the temperature will be stored.

**NOTE:** *If you wish to move the data to another location the store screen will prompt you to spin to the desired location and then to press Enter again.*

- You will be given a prompt to press Enter to EXIT.
- Click to exit.

You need to use the proper cable connection for this input. The Line Input Jack Specifications are: 1/8" phone jack, tip positive, sleeve negative. Input level is 0-5 V DC maximum. Input resistance is 50 k OHMS.



TRANSFER FUNCTION: 1 mV DC/degree (°C or °F).  
INPUT RANGE: 10° to 475° (°C or °F).

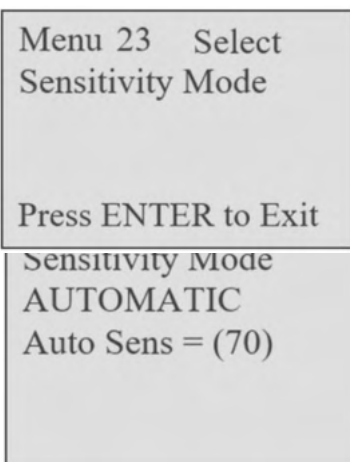
## **MENU 21: SENSITIVITY MODE**

### **MANUAL / AUTOMATIC - Auto Sens. (0 to 70 up or down)**

The instrument's sensitivity can be adjusted manually or automatically. In the manual mode, if a sensed ultrasound is too loud or too soft, or out of range, the inspector must adjust the sensitivity up or down using the Sensitivity Control Dial. In automatic, the inspector can pre-select a sensitivity level that will represent a percentage of the scale displayed on the bar graph. The levels are 0 to 99 (%). For loud environments, the range will be down scaled, while for inspections where high sensitivity is required; the level can be scaled up. For recording sounds, as an example, the automatic scale should be set at 50 or lower. At 50 the instrument will attempt to maintain a 50% of scale reading on the bar graph. If the sound level is too low, the bar graph level will drop below 50%. If the level is high, the instrument will attempt to maintain an average of 50% on the bar graph. The volume level will also rise and fall in relation to the set sensitivity level.

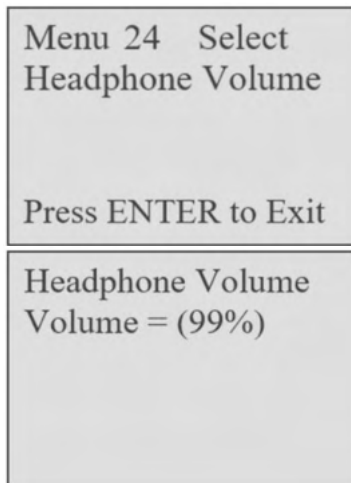
## TO SELECT AN AUTOMATIC RESPONSE

- Follow the steps to enter the Setup Mode as described earlier.
- Spin to Menu 23 Sensitivity Mode.
- Click to Enter.
- Spin from Manual to Automatic.
- Spin the percent of scale desired.
- Click to exit.
- Press the Yellow ENTER button to exit.



## MENU 22: HEADPHONE VOLUME (VOLUME = 99%) OR LOWER

Here you can set the comfort level of the headphone volume. The setting can range from 00 to 99% of the volume.

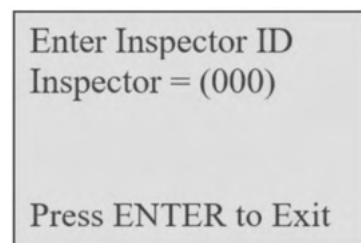


### TO SELECT THE VOLUME LEVEL OF YOUR HEADPHONES

- Follow the steps to enter the Setup Mode as described earlier.
- Spin to Menu 24: Headphone Volume.
- Click to Enter.
- Spin to the desired volume level.
- Click to set.
- Press the Yellow ENTER button to exit.

## MENU 23: ENTER INSPECTOR ID

- The Inspector ID number is set for 3 alphanumeric positions.
- Follow the steps to enter the Setup Mode as described earlier.
- To enter Inspector ID, Click the Sensitivity Dial.

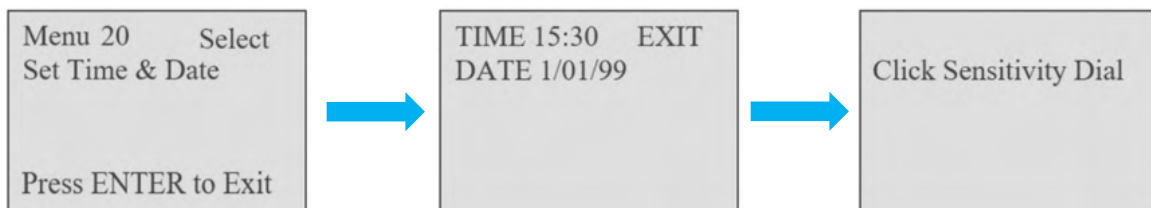


- Spin the Sensitivity Dial to select the alphanumeric value.
- Click to set. The cursor will roll over to the next position.
- Press the Yellow ENTER button to exit.

## MENU 24: SET TIME AND DATE

- Follow the steps to enter the Setup Mode as described earlier.
- Spin to Menu 20: Set Time and Date
- Click to Enter (EXIT Blinks).
- Spin to desired Month or Day or Year and Click (selected number will blink rapidly).
- Spin to select a new value
- Click to set.
- Spin to TIME setting and click on either Hour or Minute (the displayed number will blink rapidly).
- Once an Hour or Minute has been selected, spin to select a new value.
- Click to Set.
- When through, spin the Sensitivity Control Dial until EXIT flashes.
- Click the Sensitivity Control Dial again and return to the Setup Mode.
- Press the Yellow ENTER button to exit.

**NOTE:** To change the date format from US Standard to International Standard see Menu 20 Date Format.

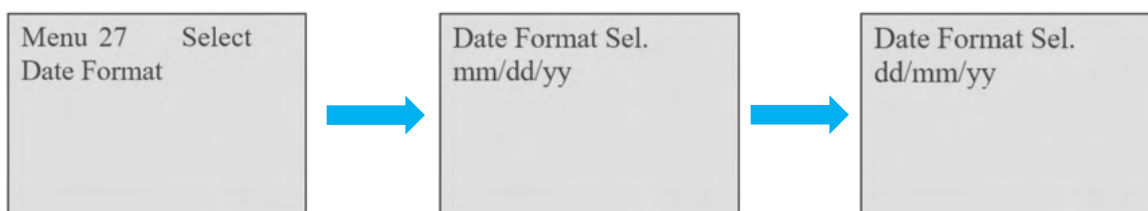


## MENU 25: DATE FORMAT

The Date Format can be changed from the US standard (month/day/year) to the International Format: (day/month/year).

### TO CHANGE THE DATE FORMAT

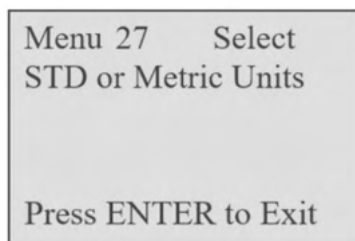
- Follow the steps to enter the Setup Mode as described earlier.
- Spin to Menu 27: Date Format.
- Click to Enter.
- The date format, mm/dd/yy, will blink.
- Spin the Sensitivity Control Dial to dd/mm/yy.
- Click the Sensitivity Control Dial to exit.



## MENU 26: CAL DUE DATE

Shown as Cal Due Date in the menu, this date is set at the factory and displays the recommended Recalibration/service date. This is one mode that cannot be changed by a user. It is only set at the factory after a service has been performed.

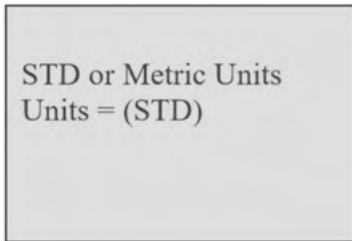
**NOTE:** *This information cannot be changed by the user.*



## MENU 27: STD OR METRIC UNITS

### TO CHANGE THE DATA UNITS

- Follow the steps to enter the Setup Mode as described earlier.



- Spin to Menu 27 STD or Metric Units
- Click to Enter
- Spin to STD or Metric
- Click to set
- Press the Yellow ENTER button to exit.

## MENU 28: DISPLAY MODE

There are three modes to choose in **Display Mode: Real Time, Snapshot and Peak Hold**.

- **REAL TIME** is the standard operation of the instrument. For basic inspection operations choose Real Time.
- **SNAPSHOT** is a very useful mode for inspections that require a comparison of measurements. Snapshot holds a specific reading on the display. The display can be updated by pressing the ENTER button to hold and change a reading. An example of this operation mode would be to locate the loudest point in a machine. By pointing the instrument at a loud signal and pressing the ENTER button, the sound intensity level will be displayed on the panel and held for comparison until the ENTER button is pressed again, as the instrument is scanned around other points on the machine. The meter will remain constant while the audio levels change. Another example is performing a quick comparison of multiple bearings by pressing the ENTER button often to update and compare sound levels.
- **PEAK HOLD** displays and holds the peak value for comparison. It changes only when a higher ultrasound level is sensed. The bar graph will move up and down to display sound intensities, but the Peak Hold dB reading in the upper left corner will remain constant. A thin vertical line on the bar graph indicates the peak intensity of the bar graph. The Peak Hold dB reading can be reset by using the "Clear Peak Value" function which is automatically listed in the Function Bar during the Peak Hold Mode or by turning the instrument off or by changing the frequency.

### TO SELECT DISPLAY MODE

- You must be in the Setup Mode.
- Spin to Display Mode (Menu 30 Blinks).
- Click the Sensitivity Control Dial to enter Display Mode.

- Spin the Sensitivity Control Dial until the desired setting (Real Time, Snap Shot or Peak Hold) appears and blinks.
- Click the Sensitivity Dial to set and return to Setup Mode.
- Press the Yellow ENTER button to exit.

## MENU 29: dB SCALE TYPE SELECT (RELATIVE OR OFFSET)

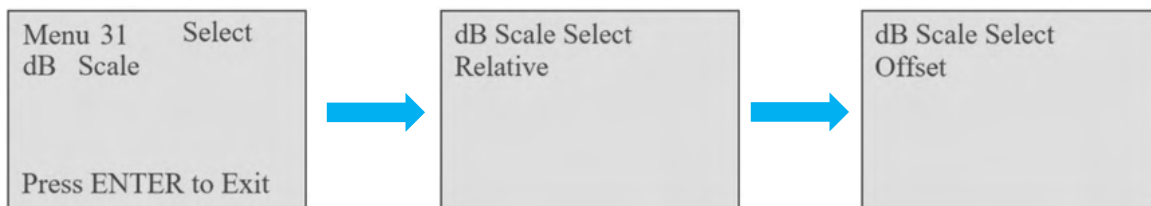
dB Select has two settings from which to choose. These settings will determine the baseline dB reference level of the instrument. Once selected, all test results will be based on the selected baseline dB level. **There are two scales: Relative and dB offset.**

**RELATIVE** sets the instrument to the 0 dB of the instrument's internal minimal detection value and is the factory default setting.

**dB OFFSET** is a dB level that is a new minimum reference level set by the user. This value may be any dB level above the natural 0 dB of the instrument. Once set, the preset level must be subtracted from the reading to determine an accurate dB increase. (EG: if "10" is the dB offset value and a subsequent reading is 25 dB, then the increase is 15 dB.)

### TO SELECT A dB REFERENCE SCALE

- Enter the Setup Mode
- Spin to dB Scale Select (Menu 31 blinks).
- Click in the Sensitivity Control Dial.
- Spin the Sensitivity Control Dial to the desired scale (Relative or Offset).
- Click the Sensitivity Control Dial to set.
- Press the Yellow ENTER button to exit.





## MENU 30: dB OFFSET VALUE

This position is selected to set the dB scale for readings to be taken in dB offset scale. To set the dB offset scale:

- Follow the steps to enter the Setup Mode as described earlier.
- Spin to dB Offset Val (value) (Menu 32 blinks) and click in the Sensitivity Control Dial.
- The dB Val (00) will blink.
- Spin the Sensitivity Control Dial to the desired dB value level.
- Click the Sensitivity Control Dial to set.
- Press the Yellow ENTER button to exit.

Menu 32      Select  
dB Offset    Val

Press ENTER to Exit

dB Offset Val  
dB VAL = (00)

## MENU 31: BACK

This changes the Setup screen back to the 1st level (Menus 1-11).

**In order to Exit to Program, you must be in the first level of the Setup Mode.**  
Press the Yellow ENTER button and you will exit to Operations Mode.



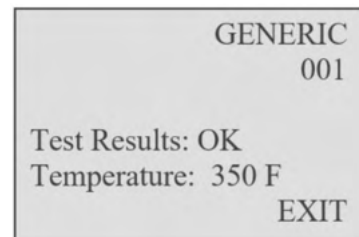
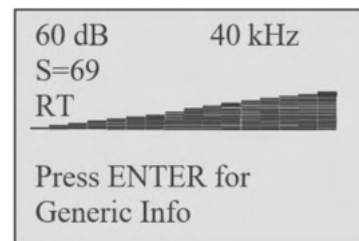
## HOW TO USE THE APPLICATION SELECT MODES

### GENERIC

To view Generic Info, click the Sensitivity Dial to the bottom of the Display Panel until "Press ENTER For" is blinking. Spin to Generic Info and press Enter.

#### To enter a test condition:

- Spin to Test: the condition default is OK and will blink slowly. If it is necessary to change:
- Click with the Sensitivity Control Dial and the condition (OK) will blink rapidly.
- Spin to select a condition indication. The choices are; OK, CHK (check), NE (no entry), and OK.
- To Set, Click the Sensitivity Control Dial (the condition will blink slowly).
- Spin to Temperature should a Temperature entry be desired.
- Click on the Temperature setting (it will blink rapidly). For example, if you are looking to enter a reading of 250; Spin to the left to select the value of "200" and to the Right to select the value of 50).
- Click to Set.
- Press Enter to store the information or Spin and Click to Exit.



If **Parameter Info** has been selected in the **Storage Display** function, the identical data and data entry as described above will be shown. Additional information such as date, time, module used and a command for data storage will be shown in the MORE function.

## VALVES

To use the ABCD Display Screen after Valves Application has been set, spin to Menu 02, Display Screens. Click to enter and spin to ABCD. Click to select and press ENTER to Exit.

To view Valves Info, click the Sensitivity Dial until the cursor moves to the bottom of the Display Panel and "Press ENTER For" is blinking. Spin to Valve Info and press Enter.

### To enter a test condition:

- Spin to the Test condition, default is OK and will blink slowly. If it is necessary to change:
- Click with the Sensitivity Dial and the condition (OK) will blink rapidly.
- Spin to select a condition indication. The choices are; LEK, NE, NIS, OK, CHK.
- To Set, Click the Sensitivity Dial (the condition will blink slowly)
- Spin to Temperature should a Temperature entry be desired
- Click on the Temperature setting (it will blink rapidly) For example, if you are looking to enter a reading of 250; Spin to the left to select the value of "200" and to the Right to select the value of 50).
- Click to set
- To enter PIPE Diameter, spin to PIPE DIA and click to enter
- Spin to desired Pipe Diameter
- To set valve TYPE, spin to TYPE
- Click to enter and spin to the desired Type
- Click to set
- Press Enter to store the information and: spin to EXIT and click to exit.

## FIELD ENTRY LIST FOR VALVES

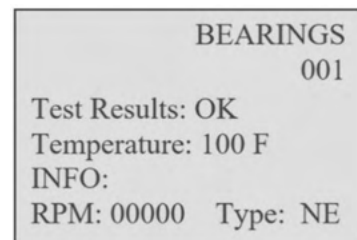
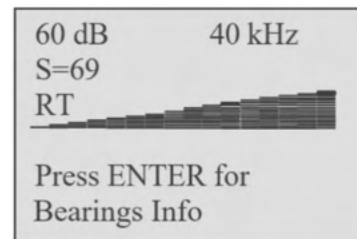
Test Results selection: LEK/NE/NIS/OK/CHK

TYPE selection: GTE/BLL/BFY/NE/OTH

**NOTE:** *If Storage Display is selected the ABCD Screen will not be However, the Parameters Information function can be used to input of test results as described above.*

## BEARINGS

- To view Bearings Info, click the Sensitivity Dial and move the cursor to the bottom of the Display Panel until "Press ENTER For" is blinking. Spin to Bearings Info and press Enter.
- To enter a test condition:
- Spin to Test Results: the condition default is OK and will blink slowly. If it is necessary to change:
- Click with the Sensitivity Dial and the condition (OK) will blink rapidly.
- Spin to select a condition indication. The choices are; OK, INP, NE, BAD, LUB.
- To Set, Click the Sensitivity Dial (the condition will blink slowly)
- Spin to Temperature should a Temperature entry be desired.
- Click on the Temperature setting (it will blink rapidly)  
For example, if you are looking to enter a reading of 250; Spin to the left to select the value of "200" and to the Right to select the value of 50).
- Click to set
- Press Enter to store the information and Spin to EXIT and click to exit.



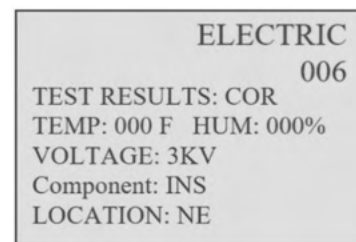
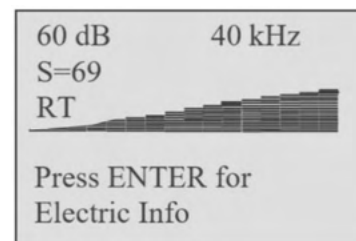
## FIELD ENTRY LIST FOR BEARINGS

Test Results: OK/INP/NE/BAD/LUB

RPM: 00001-99999 Type: NE (can be modified)

## ELECTRICAL

- To view Electrical Info, click the Sensitivity Dial until the cursor moves to the bottom of the Display Panel until "Press ENTER For" is blinking. Spin to Electric Info and press Enter.
- To enter a test condition:
- Spin to Test Results: the condition default is COR and will blink slowly. If it is necessary to change:
- Click with the Sensitivity Dial and the condition (COR) will blink rapidly.
- Spin to select a condition indication. The choices are; COR, BAD, TRK, ARC, PD, NE, MEC (Mechanical looseness)
- To Set, Click the Sensitivity Dial (the condition will blink slowly)
- Spin to Temperature should a Temperature entry be desired
- Click on the Temperature setting (it will blink rapidly) For example, if you are looking to enter a reading of 250; Spin to the left to select the value of "200" and to the Right to select the value of 50).
- Click to set
- Spin to Humidity
- Click to enter
- Spin to VOLTAGE
- Click to enter and spin to the desired Voltage
- Click to set
- Spin to Component
- Click to enter
- Spin to desired Location
- Click to set
- Spin to desired Location



- Click to set
- Press Enter to store the information and Spin and click to exit.

If **Parameter Info** has been selected in the **Storage Display** function, the identical data and data entry as described above will be shown. Additional information such as date, time, module used and a command for data storage will be shown in the MORE function.

### **FIELD ENTRY LIST FOR ELECTRICAL: TEST RESULTS: COR/BAD/TRK/ARC/PD/NE/MEC**

VOLTAGE: 120V-750 KV

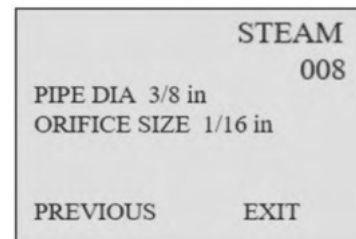
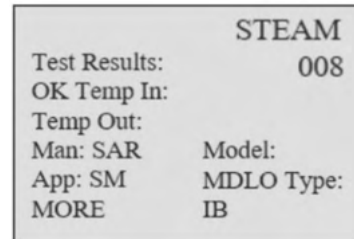
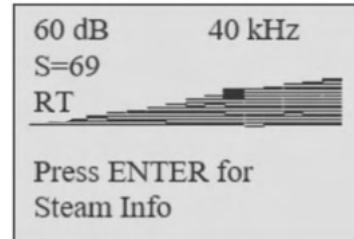
COMPONENT: INS/SGR/TFR/BSR/TER/DCT/NE

LOCATION: Loc0 to Loc9

## **STREAM**

- To view Steam Info, click the Sensitivity Control Dial to move the cursor to the bottom of the Display Panel until "Press ENTER For" is blinking. Spin to Steam Info and press Enter.
- To enter a test condition:
- Spin to Test: the condition default is OK and it will blink slowly. If it is necessary to change:
- Click with the Sensitivity Control Dial and the condition (OK) will blink rapidly.
- Spin to select a condition indication. The choices are; OK, LEK/BLW/NIS/PLG/SIZ/OTH.
- To Set, Click the Sensitivity Control Dial (the condition will blink slowly).
- Spin to Temperature In.
- Click on the Temperature setting (it will blink rapidly) For example, if you are looking to enter a reading of 250; Spin to the left to select the value of "200" and to the Right to select the value of 50).
- Click to set.
- Spin to Temperature Out.

- Click on the Temperature setting (it will blink rapidly) and repeat "h" from above.
- Click to set
- Spin to Man (Manufacturer)
- Click to enter and Spin to the desired Manufacturer. The choices are: SAR/ARM/BES/NIC
- Spin to Model
- Click to Enter and spin to a Model code. The choices are coded MDL0 to MDL9
- Click to set
- Spin to Application and click to enter
- 19 Spin to select an Application. The choices are: SM/AH/RAD/HE/TR
- Click to set
- Spin to Type
- Click to enter and spin to select. The choices are: IB/TD/TH/FT
- Spin to MORE
- Spin to PIPE DIAMETER
- Click to enter
- Spin to the desired diameter
- Click to set
- Spin to ORIFICE SIZE
- Click to enter and spin to desired ORIFICE SIZE
- Click to set
- To return to previous screen, spin to PREVIOUS and Click or
- Press Enter to store the information and Spin and Click to exit.



If **Parameter Info** has been selected in the **Storage Display** function, the identical data and data entry as described above will be shown. Additional information such as **Date, Time, Module** used and a command for data storage will be shown in the MORE function.

## FIELD ENTRY LIST FOR STEAM

Test Results: OK/LEK/BLW/NIS/PLG/SIZ/OTH Man: SAR/ARM/BES/NIC/

Model: MDLO to MDL9 App: SM/AH/RAD/HE/TR/

Type: IB/TD/TH/FT/

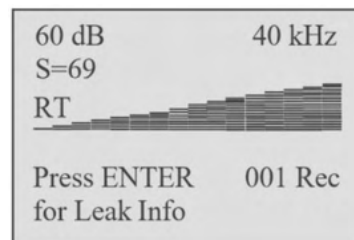
PIPE DIA: 1/16, 1/8, 1/4, 3/8, 1/2, 3/4, 1.00, 1.25, 1.50, 2.00, 2.50, 3.00, 3.50, 4 up to 36 in. ORIFICE SIZE 1/32, 1/16, 3/32, 1/8, 5/32, 3/16, 7/32, 1/4, 9/32, 10/32, 11/32, 3/8, 13/32

## LEAKS

To view Leak Info, click the Sensitivity Control Dial to move the cursor to the bottom of the Display Panel until "Press ENTER For" is blinking. Spin to Leak Info and press Enter.

## TO ENTER A TEST CONDITION

- Spin to Test Results: the condition default is LEK and will blink slowly. If it is necessary to change:
- Click with the Sensitivity Control Dial and the condition (LEK) will blink rapidly.
- Spin to select a condition indication. The choices are; LEK, CHK, OK, NE
- To Set, Click the Sensitivity Control Dial (the condition will blink slowly)
- Spin to Pressure
- Click on Pressure to enter and spin to desired pressure (PSI or BAR)
- Click to Set
- Spin to Application (codes can be modified)
- Click to enter and Spin to desired Application
- Click to Set





- Spin to Distance
- Click to Enter
- Spin to select Distance
- Click to Set
- Press Enter to store the information and Spin and Click to exit.

|                      |
|----------------------|
| LEAK<br>009          |
| Test Results: LEK    |
| Press: 0000 PSI App: |
| NITR                 |
| Distance: 15 in      |

If **Parameter Info** has been selected in the **Storage Display** function, the identical data and data entry as described above will be shown. Additional information such as **Date, Time, Module Used** and a command for **Data Storage** will be shown in the MORE function.

### FIELD ENTRY LIST FOR LEAKS

Test Results: LEK/CHK/OK/NE

Press: 0000 PSI (BAR)

App: ie; CAIR for "compressed air"

Distance: 5 in, 6 in, up to 15 in, then 2 ft to 30 ft (38 CM, 1M, 1.5M 2M, 2.5M up to 10M)

**NOTE:** *All Field Entry Lists shown above are the factory lists that can be hanged/customized in the Ultratrend Software. After the completing the changes, they may be uploaded to the Ultraprobe 10000.*



## ULTRAPROBE 10,000 SPECIFICATIONS

|                               |                                                                                                                                      |
|-------------------------------|--------------------------------------------------------------------------------------------------------------------------------------|
| <b>CONSTRUCTION</b>           | Hand-held pistol type made with coated aluminum and ABS plastic.                                                                     |
| <b>CIRCUITRY</b>              | Solid State Analog and SMD Digital Circuitry with temperature compensation and true RMS conversion.                                  |
| <b>FREQUENCY RANGE</b>        | 20 KHz to 100 KHz (tunable in 1 KHz increments)<br>Response Time: < 10 ms                                                            |
| <b>DISPLAY</b>                | 128 x 64 LCD with LED Backlight Memory: 400 storage locations                                                                        |
| <b>BATTERY</b>                | Lithium Ion Rechargeable                                                                                                             |
| <b>OPERATING TEMP.</b>        | 32°F to 122°F (0°C to 50°C)                                                                                                          |
| <b>OUTPUT(S)</b>              | Calibrated heterodyned output, decibel (dB), frequency                                                                               |
| <b>PROBES</b>                 | Trisonic Scanning Module, Stethoscope Module & Long Range Module<br>Headset: Deluxe noise attenuating headphones – for hard hat use. |
| <b>INDICATORS</b>             | dB, Frequency, Battery Status, and 16 Segment Bar Graph                                                                              |
| <b>SENSITIVITY</b>            | Detects .005" (.127 mm) diameter leak @ 5psi (.34 bar) at a distance of 50 ft. (15.24 m)                                             |
| <b>THRESHOLD*</b>             | 1 x 10 <sup>-2</sup> std. cc/sec to 1 x 10 <sup>-3</sup> std. cc/sec                                                                 |
| <b>DIMENSIONS</b>             | Complete kit in Zero Halliburton aluminum carrying case 21.5" x 18.5" x 8" (55 x 47 x 20 cm)                                         |
| <b>WEIGHT</b>                 | Pistol Unit: 2.35 lbs. (1.1 kg)                                                                                                      |
| <b>COMPLETE CARRYING CASE</b> | 19 lbs. (8.6 kg)                                                                                                                     |
| <b>WARRANTY</b>               | 1 year parts/labor standard, 5 years with returned completed warranty registration.                                                  |
| <b>MODES</b>                  | Real Time, Snap Shot, Peak Hold, Storage Display and Application specific. *Depends on leak configuration.                           |
| <b>ULTRAPROBE 10,000 KIT</b>  | Meets and exceeds ASTM E1—2-2011 requirements for Leak Detection.                                                                    |

Covered by one or more of the following patents: 051115, 0303776, 0315199, 1206586, 1297576, 1881263, 2562758, 2689339, 4416145, 4823600, 5955670, 6122966, 6339961, 6341518, 6415645 & and others pending.

UE Systems is committed to continual product improvement therefore specifications are subject to change without notice. Warranty details are available by request.

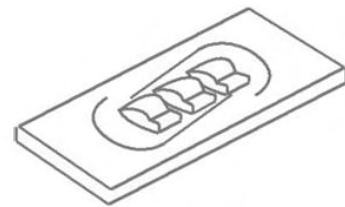


## INSTRUCTIONS FOR SETTING COMBINATION ON CARRYING CASE

The combination is factory set at --0--0--0

### SETTING YOUR PERSONAL COMBINATION

- Open the case. Looking at the back of the lock inside the case you will see a change lever. Move this change lever to the middle of the lock in a way that allows it to hook behind the change notch (drawing 1).
- Set your personal combination, turning the dials to the desired combination (i.e. birthday, phone #, etc.).
- Move the change lever back to the normal position (drawing 2).
- To lock, rotate one or more dials. To open, set to your personal combination.



1.



2.



INTERNATIONAL PATENTS PENDING

**YOUR PERSONAL COMBINATION:**



Need further support?  
Want information regarding products or training?

## CONTACT:

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