Charging the Docking Station and Headphones

91929
SmartEAR 2
NOISE & VIBRATION DETECTION

USER GUIDE
for iPhone®, iPad®, and iPod touch®

STEELMAN®PRO

To charge the docking station, use the two port USB charger and one charging cable. The user may choose to charge both the headphones and the docking station at the same time if desired by plugging both USB cables into the charger. Plug the male end of the charging cord into the docking station to the left of the color coded channels where it says 5 VDC. The red light indicator should light up to the left of the battery to indicate the docking station is charging. When the docking station is fully charged, the battery indicator light will turn off. Allow 4 hours for the battery to get fully charged.

To charge the Bluetooth wireless headphones, use the two port USB charger and one charging cable. The user may choose to charge both the headphones and the docking station at the same time if desired by plugging both USB cables into the charger. Plug the male end of the charging cord into the USB female end slightly above the power button on the headphones. The battery light will light up red signifying that the headphones are charging. When the headphones are fully charged, the battery indicator light will turn off. Allow 3 hours for the battery to get fully charged.

This device complies with part 15 of the FCC Rules Operation is subject to the following two conditions:
 (1) This device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy, and if not installed and used in accordance with the instructions, may cause harmful interference to radio communication. However, there is no guarantee that the interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

• Reorient or relocate the receiving antenna

• Increase the separation between the equipment and receiver

• Connect the equipment into an outlet on a circuit different from that to which the receiver in connected

• Consult the dealer or an experienced radio/TV technician for help

Designed in Las Vegas, NV

Made in China

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Steelman®PRO SmartEAR™2 is backed by a 90 day warranty. This warranty covers manufacturer defects and workmanship. The warranty excludes misuse or abuse and normal wear and tear. Exclusion is not allowed in some states and may not apply. This warranty gives you specific legal rights, and you may have other rights, which vary from state to state.

Download on the App Store

TABLE OF CONTENTS

Deleting Recordings

- From the saved recordings screen, events can be selected by tapping on the text area of the file name

- The text background will highlight red
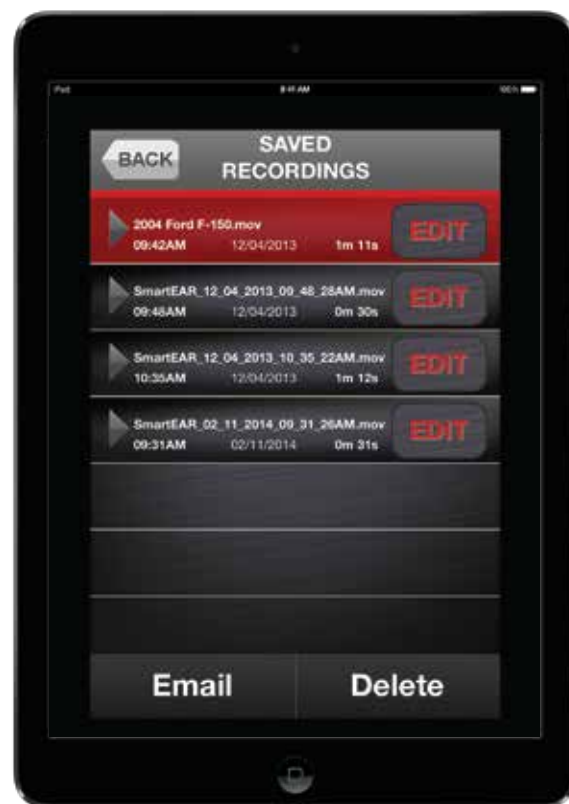
- Tap **DELETE** button to delete the selected recording
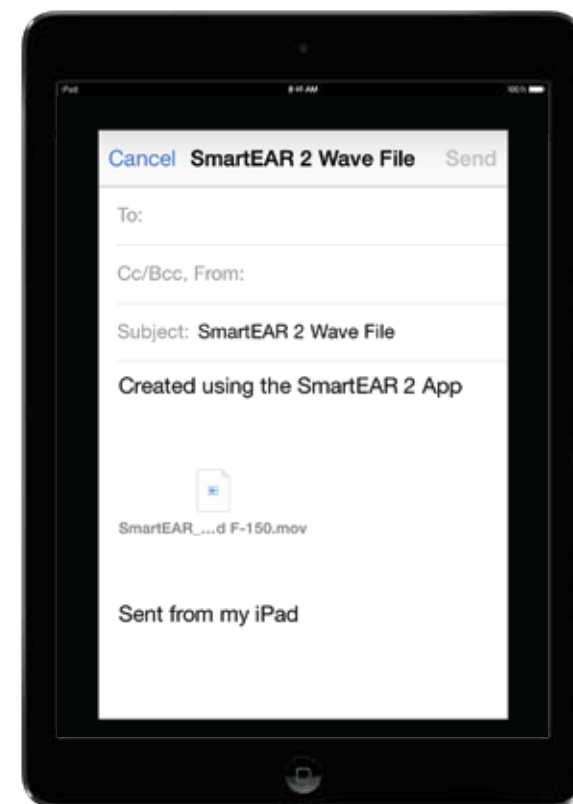
SAVED RECORDINGS SCREEN

File Sharing and Changing File Name

Note: The default file name for saved files will be a time and date stamp

• To change the file name of the event, select to highlight the event to be renamed and tap the EDIT icon, type the new name of the file and tap the Save button

• After successfully saving the file, simply choose the EMAIL button option and populate the

TO: field and hit the Send icon

SAVED RECORDINGS SCREEN

EMAIL RECORDING SCREEN

Use of SmartEAR™2

• After completing the initial set-up, you can begin analyzing and pinpointing the location of the noise or vibration sounds that you are attempting to diagnose

• SmartEAR™2 hardware kit and app will easily help to locate noise or vibration in a troubled area

• SmartEAR™2 utility application is available on the App Store℠

NOTE: Before attaching hardware to your iPhone®, iPad® or iPod touch®, please see Quick Set-up Guide

Initializing App and Landing Screen

- To initiate application, tap the Steelman®PRO SmartEAR™2 ![SmartEAR2 icon] icon from the home screen of the iPhone, iPad, or iPod touch

- Once the application has finished loading, it will take you to the landing screen, the user will be able to navigate throughout the app and adjust settings from here

File Playback

- Tap ![file icon] icon to access all sound files

- Once you have finished recording, you then have the ability to review your sound file that was automatically saved to the iPhone, iPod touch, or iPad

- To play back an event, tap the ![play icon] icon

LAUNCH SCREEN

LANDING SCREEN

SAVED RECORDINGS SCREEN
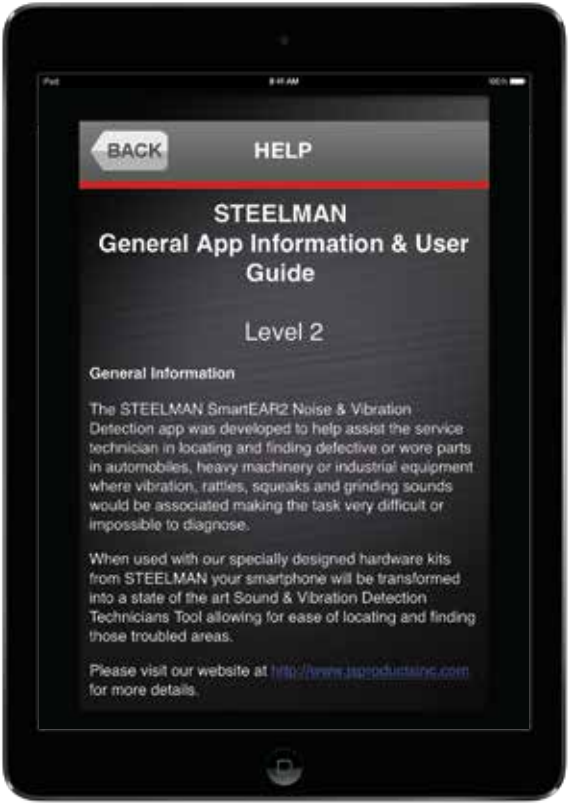

RECORDING PLAYBACK SCREEN

File Recording

- From the landing screen during a test drive or diagnostic test, the event can be recorded and will automatically save to memory on the saved recordings page (see page 16)

- To record the event, press the ⬤ icon on the landing screen

- Press the ⬜ icon to stop while recording (this will end recording the event)

- Press the ⬚ icon to pause recording the event, and press the ⬚ icon again to resume recording the event

- The files can be played back immediately, archived to build a database, shared with another technician, or emailed to a customer as confirmation that a repair is needed or that one has been completed

RECORDING SCREEN

Interface Help and User Information

- For user interface or reference information, tap the settings ⚙ button, then select the INFORMATION or HELP icons from the settings screen

- Additional reference information for sound comparison and tips on use of the application can be found here

- Tap ? icon from the settings screen for the HELP screen

- Tap ⓘ icon from the settings screen for the INFORMATION screen

HELP SCREEN

INFORMATION SCREEN

Sound Mode

- Select either the Sound Wand or the Sensor Clamp mode, depending on the type of the diagnostic testing required

- To enable the Sound Wand, tap and hold the microphone 🎤 icon until it highlights

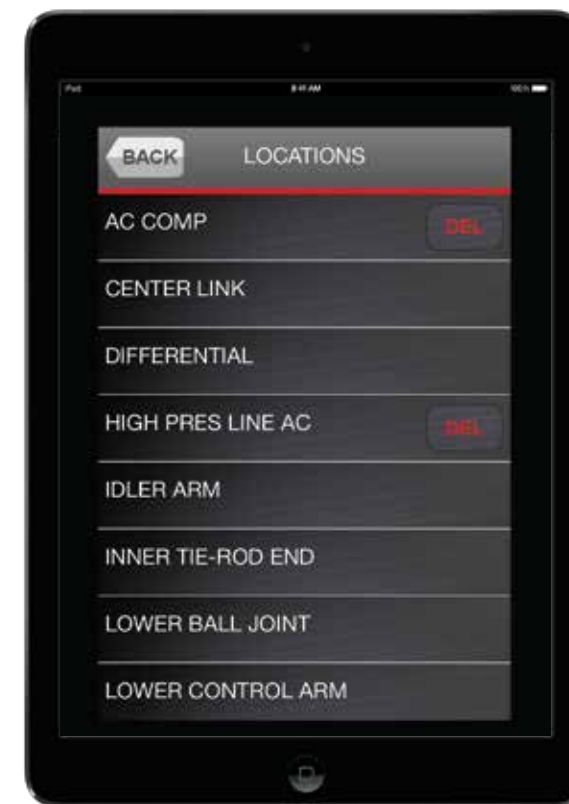- To enable the Sensor Clamp, tap and hold the clamp ⋀ icon until it highlights
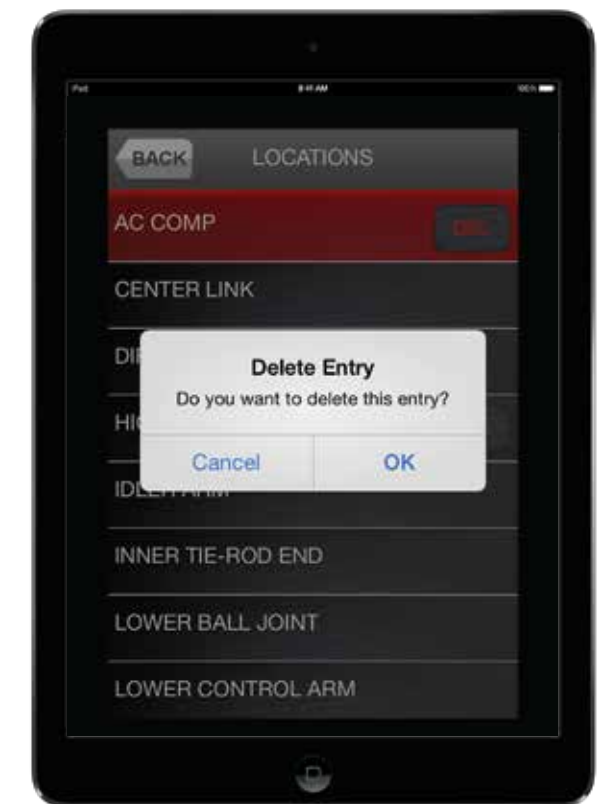

SOUND WAND

SENSOR CLAMP

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Removing Custom Clamp Locations

- Custom location descriptions are saved to the pull down menu automatically and placed in alphabetical order

- If desired, custom location descriptions can also be deleted from the pull down menu if no longer needed

- Tap **DEL** button for the corresponding position that needs to be deleted from the locations list
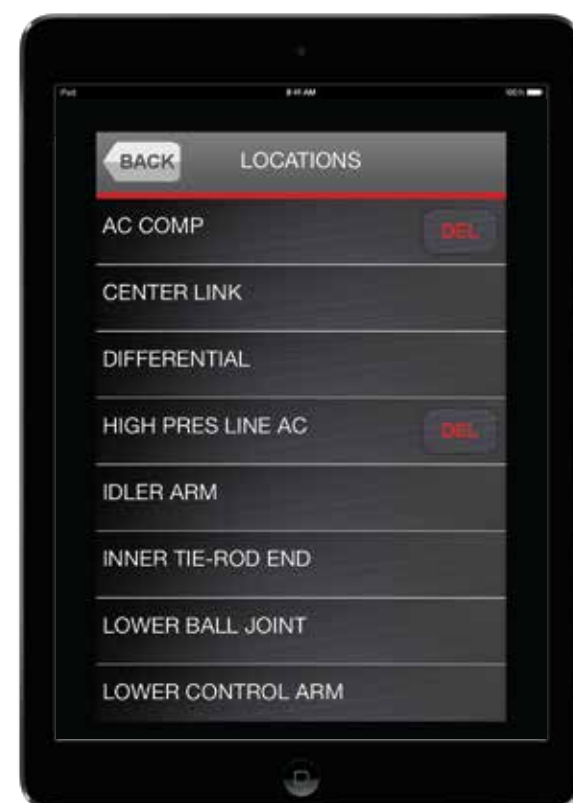

LOCATION DESCRIPTIONS LIST

DELETE ENTRY CONFIRMATION

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Assigning Clamp Locations

- Tap the text box again on the location assignment screen to access preloaded locations from the location pull down menu screen

- You may create a custom location by scrolling to the bottom of the list and selecting Other (specify)

- Once a specific location has been selected or created from the Other (specify) selection, tap on the general location of the clamp on the location assignment screen (tap to select Front, Left-Front, Right-Front, Left-Rear, Right-Rear, or Rear)

- Tap **OK** button to return to the channels screen

- Create clamp locations for each of the other corresponding channels to be used in the test in the same manner as previously described

- To reset all clamp location names, tap the 🅖 icon to clear all previously selected locations

- When finished assigning channel locations, tap **BACK** button to return to the landing screen

LOCATION ASSIGNMENT SCREEN

LOCATION PULL DOWN MENU SCREEN

View Mode

- After selecting the mode of operation, select the desired viewing mode (there are two viewing modes: Analog and Digital)

- Tap 👁 button to change between views

ANALOG GAUGE

DIGITAL GAUGE

Pairing Headphones

- Switch power "ON" for docking station, be sure system is fully charged

- Hold power button on wireless headphones until you hear a beep (be sure when troubleshooting that you are listening to the correct channel)

- Docking station and headphones will pair up together automatically

- If pairing is unsuccessful, further setup may be required
    (a) To initiate pairing mode for the wireless headphones, restart headphones then press and hold the power reset button until LED indicator flashes Red and Blue rapidly
    (b) Next initiate pairing mode on the docking station by pressing the pairing button located next to the USB charging port until Blue LED pair indicator flashes rapidly
    (c) Once the wireless headphones and docking station have paired, the LED indicators will change to slow blue flashes signifying the pairing was successful

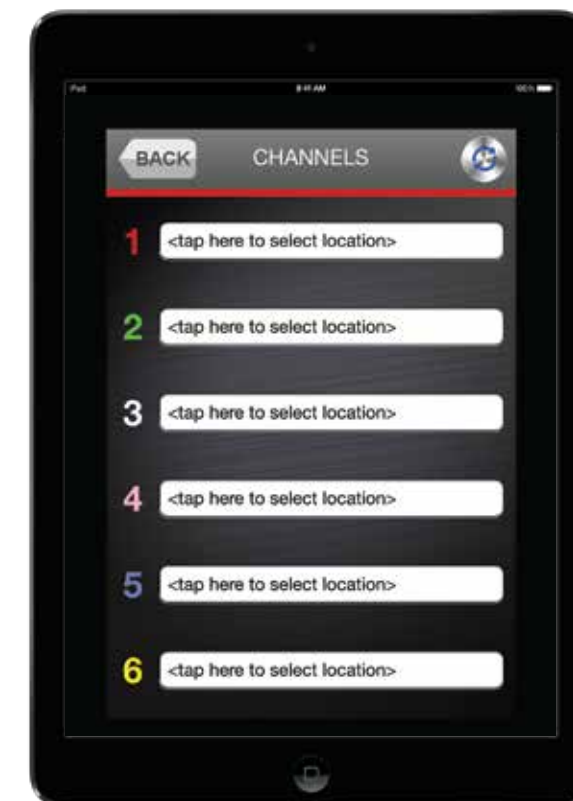- Once docking station and headphones have paired successfully, the hardware is now ready for use

PAIRING RESET

DOCKING STATION TOP PORTS

POWER BUTTON

LED INDICATOR

WIRELESS HEADPHONES

POWER BUTTON

LED INDICATOR

DOCKING STATION

Assigning Clamp Locations

- From the settings screen or landing screen, tap **CH** button to access the channels screen

- Tap **1** <tap here to select location> text box to access the location assignment screen for clamp 1
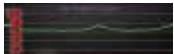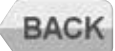
CHANNELS SCREEN

Equalizer

- From the settings screen, you can also access the built-in 10-Band Equalizer where individual frequency level audio signals can be adjusted

- Tap [e] icon to access the 10-Band Equalizer controls

- After making manual adjustments to the equalizer, the application can be reset to the default values at any time by tapping the [icon] icon

- Tap [OK] button after equalizer settings have been adjusted

EQUALIZER SCREEN

Expanded Screen View

- By double tapping the lower portion of the landing screen, you may choose between two expanded views: Analog Waveform or Digital Bar Graph

- Double tap lower screen [image] for Analog Waveform when Analog mode is engaged

- Double tap lower screen [image] for Digital Bar Graph when Digital mode is engaged

- Press [BACK] button to return to the landing screen

ANALOG WAVEFORM

DIGITAL BAR GRAPH

Ambient Sound Reset and Offset

- Tap ![a] button for ambient sound reset (this is recommended for areas where there is excess or disruptive background noise)

- Tap ![a] button again for ambient sound offset (this will restore sound settings to location when originally powered)

- Tap ![icon] icon for automatic default reset

- Tap the ![CH+/-] button until the desired channel for the corresponding clamp that you would like to listen to and see visual output for appears on the channel indicator

AMBIENT OFFSET/RESET

CHANNEL BUTTON

CHANNEL INDICATOR

LANDING SCREEN

Settings

- From the landing screen, tap the settings ![gear] button for control settings

- The refresh rate can be fine-tuned depending on how the user would like to see the output (the higher the refresh rate the slower the visual output)

- The offset settings can be fine-tuned to the user's specifications depending on background noise

- The volume can be adjusted manually by moving the slide bar under the volume heading

- Tap ![gear] button again to return to the landing screen

REFRESH RATE

OFFSET

VOLUME SLIDE BAR

SETTINGS SCREEN