Learning Outcomes

- After this course, learners will be able to:
  - Describe how the Dual-Radio System uses 2 separate wireless technologies and the purpose of each
  - Pair compatible Sonic hearing aids containing Dual Radio technology to a variety of wireless products
  - Explain how Sonic hearing aids with Dual Radio technology can access the Internet of Things via a smartphone
Advanced Wireless Capabilities with Dual-Radio System

Fast and direct wireless transmissions with optimized battery life
Benefits of New Chip in SoundDNA

- Bluetooth® 2.4 GHz communication
- Power-efficient Near Field Magnetic Induction (NFMI) protocol
- High transmission rate of sound data
- 2.4 GHz Direct-to-ear streaming

- Dual-radio transmission without a significant increase in power consumption
- Improved sound quality of the transmitted signal
- Streaming without an intermediary device

Dual-Radio Wireless Technology

Two wireless systems integrated into one hearing aid

NFMI short distance ear-to-ear

2.4 GHz long distance direct-to-hearing aid
Ear-to-Ear Wireless Transmission

- Near Field Magnetic Induction signal (NFMI)
- Transmit only over a short distance
- Higher rate of information exchange

Direct-to-Hearing Aid Wireless Transmission

- 2.4 GHz without an intermediary device
- Transmit over a long distance
- “Line-of-sight” connection to avoid interference
Connectivity Portfolio

Phone Adapter 2

TV-A

Remote RC-A

Wireless Programming

SoundLink 2 app for Apple® and Android™

iPhone® direct streaming

Internet Connection

IFTTT

Technology Levels

Five Wireless Technology Levels

<table>
<thead>
<tr>
<th>100 Premium</th>
<th>80 Advanced</th>
<th>60 Mid-Level</th>
<th>40 Basic</th>
<th>20 Entry</th>
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<td>captivate 60</td>
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www.sonictail.com
Captivate Styles

Captivate offers an array of wireless behind-the-ear styles

miniRITE  
miniRITE T  
miniRITE TR  
BTE 105

2.4 GHz & NFMI Standard

www.sonic.com

Enchant Styles

Enchant offers a full line of wireless styles*

Enchant CIC  
Enchant ITC  
Enchant HSI/FS  
Enchant miniRITE  
Enchant miniRITE T  
Enchant BTE 105

NFMI Optional*  
2.4 GHz & NFMI Optional  
2.4 GHz & NFMI Standard

*NOTE: 2.4 GHz not available in CIC (NFMI only)

www.sonic.com
Trek Styles

Trek offers robust power with wireless capabilities

2.4 GHz & NFMI Standard

Connectivity with SoundDNA
Streaming Phone Calls
Made For iPhone Hearing Aid

- Streaming of phone calls, music and videos from iPhone®, iPad®, and iPod®.

32 ft | 10 m transmission range

Made For iPhone Hearing Aid

- 3 Transmission Protocols
  - Standard Bluetooth® Low Energy (BLE) protocol
  - 2.4 GHz proprietary long-distance protocol
  - Apple Bluetooth® Low Energy protocol (Made for iPhone®)
Three Bluetooth® Protocols

- **Bluetooth® Low Energy (BLE)**
  - Data Only
  - • RC-A
  - • FittingLINK 3.0
  - • VC/Program changes via the SoundLink 2 app

- **Proprietary 2.4 GHz long distance**
  - Data and Sound
  - • TV-A

- **Apple Bluetooth® Low Energy (ABLE)**
  - Data and Sound
  - • Apple products

Standard Bluetooth® Low Energy (BLE) Protocol

Data sent in both directions
2.4 GHz Proprietary Long Distance Protocol

Data and Sound

Data

TV-A

50 ft | 15 m transmission range

www.sonic1.com

Apple Bluetooth® Low Energy Protocol

Data and Sound

Data

32 ft | 10 m transmission range

www.sonic1.com
Android™ Smartphones and Tablets

- Volume and program changes via the SoundLink 2 app
- No streaming of sound or music
- Enter the SoundClip-A

SoundClip-A
Connect to Bluetooth devices
SoundClip-A

- SoundClip-A is a wireless device for audio streaming from any Bluetooth 2.1 device to compatible hearing aids
- Remote mic functionality
- Basic remote control functions
- No lanyard required

SoundClip-A Overview

1. Making Phone Calls
   - Voice dialing
   - Reject call

2. Listening to Music
   - Devices compatible with BT 2.1

3. Remote Control

4. Remote Mic

5. VoIP
   - BTD800 USB dongle
**TV-A**

- 2.4 GHz direct streaming to hearing aids
- Unlimited number of pairings
- Streaming to multiple instruments at the same time
- Digital stereo sound supported
TV-A Direct Streaming

- Not compatible with products supporting SoundGate
- 50 ft | 15 m transmission range
- Regulate the volume of the streamed signal with
  - RC-A or SoundClip-A
  - SoundLink 2
  - Ear Level Volume Control

TV-A Streams in Stereo

Stereo signal → Right aid → Right channel → Left channel → Left aid → TV
TV Program

- Available once device is paired to the TV-A
- Access the TV Program to hear streamed signal
  - Local push button
  - RC-A
  - SoundLink 2 app
- Program cycle depends on the programs already available in your hearing aids
  - Dedicated TV Program indicator
- Mute hearing aid microphones while TV Program is active
RC-A

• Operates using 2.4 GHz BLE
• Not compatible with products supporting SoundGate

Volume up
Volume down
Program change
Mute

www.sonice.com

RC-A

• RC-A will be printed on the back of the device
• 2x AAAA batteries
  • RC-A battery life is up to one year with normal use
• 6 ft / 1.8 m transmission range
• Keylock functionality available

www.sonice.com
Pairing Procedures
Mobile Phones, TV-A, SoundClip-A and RC-A

Putting devices into Bluetooth pairing mode
Non-Rechargeable

• Ensure batteries are fresh and hearing aids have been programmed together in fitting software

• Open and close battery doors and wait for start up indicator

• Hearing aids will be in pairing mode for approximately 3 minutes

Rechargeable (Li Ion)

• Ensure batteries are charged and hearing aids have been programmed together in fitting software

• Two options for rebooting hearing aids
  • Place hearing aids in and out of charging unit
  • Press and hold push button (top or bottom) for 5 seconds to shut aids down, to reboot press and hold bottom push button for 5 seconds

• Hearing aids will be in pairing mode for approximately 3 minutes
Pairing & Unpairing Your Mobile Phone

Pairing - iPhone

Place devices into Bluetooth pairing mode

Once found listed as Not Connected -> Touch on name -> Bluetooth Pairing Request - ‘Pair’

Connection is now complete and devices will automatically connect when opening the SoundLink 2 app
Unpairing - iPhone

Scroll to bottom of screen – ‘Forget this device’ – removed from both MFI settings and SoundLink 2 app

Pairing - Android

**Devices are paired directly through the app**

Download and Install SoundLink 2 app → Ensure Bluetooth is on → Open app and place devices into Bluetooth pairing mode

Once found device name will be listed - Touch on ‘Pair’ – Devices will then connect
Unpairing- Android

**Devices are removed in Bluetooth Settings**

1. Press/hold Bluetooth icon to show Bluetooth Devices
2. Select ‘Gear’ icon next to each listed Hearing Aid
3. Select ‘Unpair’
4. Hearing Aids will now show as ‘Available Devices’
5. Turn Bluetooth OFF and then ON- devices will disappear
Pairing Hearing Aids to SoundClip-A

1. Ensure SoundClip-A is powered OFF.
2. Place devices into Bluetooth pairing mode.
3. Switch SoundClip-A ON.
4. SoundClip-A searches for the hearing aids (blinks yellow).
5. Press and hold multi-function button for approx. 6 seconds.
6. Bluetooth connection is established (solid yellow).
7. Bring aids close to the SoundClip-A and to each other.
8. Press and hold multi-function button for approx. 3 seconds, power indicator shows steady green light.
9. 20 cm
10. Press and hold multi-function button for approx. 3 seconds.
11. SoundClip-A is powered ON.

Pairing SoundClip-A to Mobile Phone

1. Activate Pairing Mode.
2. Enable Bluetooth pairing mode on the Mobile phone (or any BT 2.1 enabled device).
3. Press and hold multi-function button AND VC UP button for approx. 6 seconds.
4. Bluetooth connection is established (solid blue).
5. SoundClip-A is in pairing mode for 2-3 min. once the status indicator blinks blue.
6. Enter code 0000 if asked.
7. Multi button VC up
Pairing with the TV-A

- Close proximity pairing (initial pairing)
- Fast and easy
- Make sure TV-A is powered on
- Place hearing aids into pairing mode and place on top of TV-A
  - Both power and TV indicators will be fading Blue
- Pairing is complete when power and TV indicators are blue for about 30 seconds
  - Power and TV indicators will be solid Blue for 30 seconds and then Power indicator will turn solid Red
Removal of Paired Instrument

- Must perform a system reset to remove all pairings
- Press and hold the Setup button for more than 5 seconds
- Indicators fade to blue to confirm that all pairings have been removed

<table>
<thead>
<tr>
<th>TV-A</th>
<th>Description</th>
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<tbody>
<tr>
<td></td>
<td>No pairings</td>
</tr>
</tbody>
</table>

- Fading
How to unpair the TV-A
Pairing with the RC-A

- Close proximity pairing
- No need to pair in EXPRESSfit® Pro
- Place hearing aids into pairing mode and position 6-8 inches from RC-A
- Press and release any button to complete pairing
  - Status light will turn solid Green for 10 seconds

www.sonicl.com

How to pair the RC-A

www.sonicl.com
Removal of Paired Instrument

• RC-A can only be paired to one set of devices at a time
• Must clear RC-A if necessary to pair to different devices
• To clear pairing press and hold all three buttons for 5 seconds
  • Status light will turn solid Green for 10 seconds when cleared

How to unpair the RC-A
SoundLink 2 App

Android and iOS App

SoundLink 2 Overview

Modify Tinnitus Sound Support program

Activate streaming from TV-A
Change volume of the TV-A

Available for iOS and Android™ devices

Activate streaming from SC-A
Change volume of the SC-A

Remote control functionality

Access the Internet of Things (IFTTT)
Select Programs

Touch ‘Remote Control’ from Home Screen

Current program is highlighted

Select the desired program

Volume Options

• App will show the current program and current volume status
• Volume Increase
• Volume Decrease
• Mute
• Adjust together or independently
SoundClip-A

- Place near desired sound source
- Will transmit the sound directly to the hearing instruments
- Adjust volume of both SC-A and HA microphone

Tinnitus Options

- Available in app once tinnitus program added within software
- Adjust volume of both tinnitus sound support and HA microphones
- Tinnitus options
Tinnitus Options

- Advanced Settings
  - Noise variations
  - Noise equalizer
- Restore defaults
- Adjustments within the app are based on programming

Access IFTTT

- From Home screen select IF to access IFTTT
  - Connect to hundreds of internet based services
  - Create Applets
  - https://ifttt.com/go
Internet Connectivity
If This Then That (IFTTT) Internet Service

Connect hearing devices to other devices via the Internet of Things
If This Then That (IFTTT)

• Internet-based service
• Hundreds of internet-connected devices and services
  • ‘Internet of Things’
• Connect various services, apps and devices to create ‘recipes’
• Every day a new company enters the IFTTT world, offering greater opportunities

Sonic devices and IFTTT

• All devices with 2.4 GHz
• Capable of connecting to various services and products
• Compatible iPhone®, iPad®, iPod® and Android™ devices
• IFTTT is only accessible via SoundLink 2 app on the smartphone or tablet
  • Without the app, device cannot be connected to the internet
  • Must set up an account within IFTTT
  • Smartphone/tablet needs to be connected to the internet
How are hearing aids connected with IFTTT?

Device is connected with the smartphone

The smartphone is connected to the internet

IFTTT is a service to connect applications

IFTTT cloud*

*many more applications are available

If This Then That

Weather...

Weather...

WHEN the sun goes down

... THEN turn on the lights
Sonic Devices and GO Service

- GO service is the interface between Sonic devices and other services in IFTTT

GO Service: Available Triggers and Actions

**GO Triggers**
- Program has changed
- Battery is low
- Connection to Bluetooth® device is lost
- Connection to Bluetooth® device is established
- Mute state is changed
- Volume is changed
- Power is on

**GO Actions**
- Set a program
- Increase the volume
- Decrease the volume
- Play the text to speech
- Set the volume

https://ifttt.com/go

*many more applications are available*
### Triggers and Actions

**Applet using a GO Trigger**
- If the hearing aid batteries are low, then send me a text message
- If the hearing aid is turned on, then send me a text message

**Applet using a GO Action**
- When I arrive at work, then change the program in my hearing aids
- If motion is detected on my video doorbell, then play text to speech

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**Triggers and Actions**

[Images of smartphone interfaces with applet options: Program has changed, Battery is low, Comedation is identified, Program is selected, Volume has changed, Hearing aid turned off.]
Benefits of IFTTT

- Growing number of devices are internet connected
- Hearing aid is a part of this internet-based world
- Offers convenience and individualization
Summary

Connectivity Portfolio

Phone Adapter 2

TV-A

Remote RC-A

Wireless Programming

SoundLink 2 app for Apple® and Android™

iPhone® direct streaming

Sound Clip-A

Internet Connection

IFTTT
Sonic and Connectivity

- Full line of both custom and behind-the-ear products boasting full Bluetooth connectivity options
- Standard WL in BTE products, optional WL in custom products
- 2.4 GHz Direct-to-ear streaming to iPhone with no intermediary device
- SoundClip-A available for Android streaming, hands free use of phone and remote mic functionality
- Easy pairing between accessories and hearing aids
- Hassle-free connectivity
- Convenience and individualization

Thank You!

- Thank you so much for joining us today!

- If you have any questions...
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