

Sonetics Corporation

Sonetics Corporation, based in Oregon, USA and founded in 1988, manufactures communications equipment for challenging audio environments. Sonetics are the leader in ground support and emergency responder communications.

Originally designed for use by fire fighting crews, the Sonetics wireless intercom product range provides immense flexibility and scalability for anyone requiring full duplex and/ or wireless connectivity to a two way radio.

Sonetics Corporation wireless headset systems use DECT license-free radio technology to allow full duplex communication between local teams and radio transmissions via PTT, even in high noise environments. Users have far greater freedom to move and are not restricted by wires or push buttons. Having both hands free improves efficiency and safety whilst providing crystal clear voice communications.

The basic configuration using wireless headsets and a wireless base unit is designed for local teams of 2-4 users operating handsfree in full duplex. The addition of a Sonetics intercom enables expansion of the number of users and the ability to connect the local team to a vehicle mounted two-way radio. In all cases, wireless full duplex communications is possible up to 400m away from the wireless base unit, depending on installation and environmental factors.

Full duplex means users are able to communicate in both directions without waiting for a clear channel or having to push a button.

Technology Background

The Sonetics wireless systems are based on the Digital Enhanced Cordless Telecommunications (DECT) standard. DECT was originally developed in the early 1990's for voice communications and as such is a very mature and extremely robust radio technology.

In Australia and New Zealand, DECT operates in the 1880 – 1900MHz license free spectrum.

DECT dynamically assigns channels and uses a combination of frequency and time division access, making the system very resilient to interference from other devices in the license free spectrum.

The risk of unauthorized access to DECT communications is extremely limited. It could be argued that the wireless DECT connection in itself offers high levels of security as it is both digital and encrypted. Scanning is fundamentally difficult due to the modulation scheme used by DECT devices.

Whilst based on DECT and associated security features, Sonetics have developed a unique pairing mechanism to ensure headsets automatically pair on switch on and re-connect after a user goes out of range. This pairing also ensures unwanted eavesdropping is particularly difficult and consumer DECT devices cannot be used.



Applications

- Aviation ground support crews
- Fire appliance crews
- Ambulance officers
- Police motorcycle officers
- Police – particularly where 5w hand portable coverage is not available
- Forestry
- Control rooms
- Road construction crews
- Electricity linesmen
- Crane operators
- Manufacturing lines

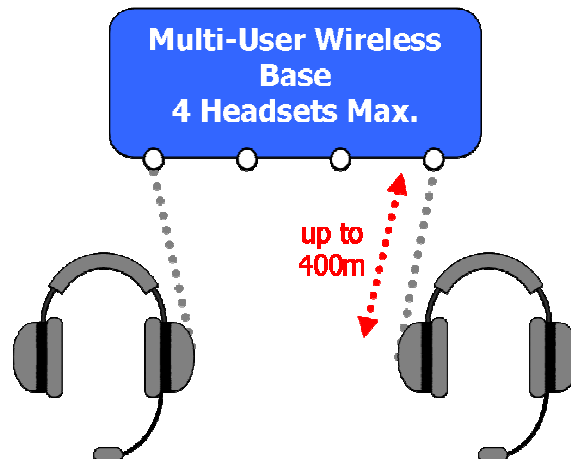
Two User Full Duplex Wireless System

Sonetics Corporation wireless headset systems use license-free radio technology to allow full duplex communication between local teams, even in high noise environments. Users have far greater freedom to move and are not restricted by wires or push buttons. Having both hands free improves efficiency and safety whilst providing crystal clear voice communications. All connected users can talk in conference; there is no need to wait for a clear radio channel.

The two user system enables both users to communicate in full duplex. The package is comprised of a multi-user base and two headsets from a choice of behind-the-head, over-the-head headsets or wireless belt packs (for use with existing wired headsets). The multi-user wireless base also allows an additional two users to be connected. System expansion is capable by adding another wireless base and Sonetics intercom.

Features	SC2 Package Includes
<ul style="list-style-type: none"> Range – up to 400m from base depending on installation License free operation Digitally encoded for secure communications Up to 40 wireless users can operate in close proximity without interference Rechargeable LiIon batteries in headsets & belt-packs Simple 'pair once' base to headset pairing on initial setup Shift life - 8-10 hours Power - 12v DC 0.5 amp maximum – can be used in remote areas powered from a vehicle 	 <p>2x Headsets (alternative headsets also available)</p>  <p>1x Multi-User Wireless Base</p>

Typical Two User System Configuration





Range measurements in ideal conditions.

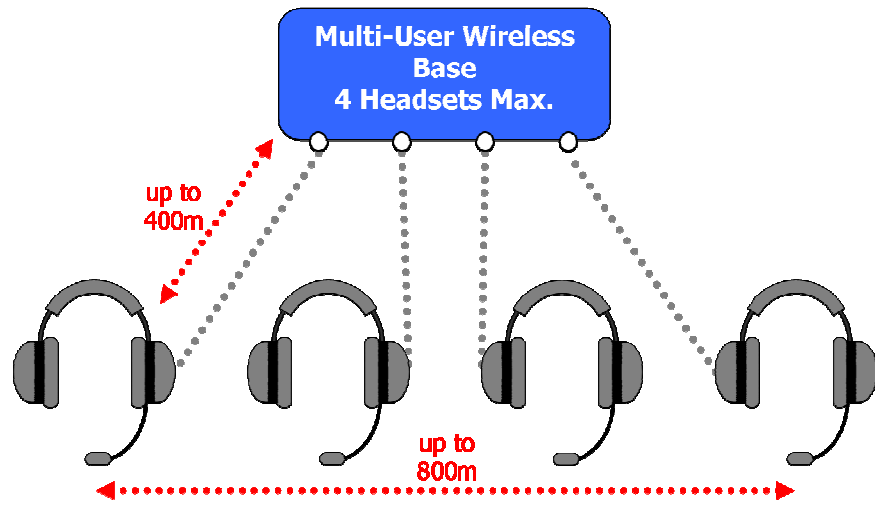
Four User Full Duplex Wireless System

Sonetics Corporation wireless headset systems use license-free radio technology to allow full duplex communication between local teams, even in high noise environments. Users have far greater freedom to move and are not restricted by wires or push buttons. Having both hands free improves efficiency and safety whilst providing crystal clear voice communications. All connected users can talk in conference; there is no need to wait for a clear radio channel.

The four user system enables all users to communicate in full duplex. The package is comprised of a multi-user base and four headsets from a choice of behind-the-head, over-the-head headsets or wireless belt packs (for use with existing wired headsets). System expansion is possible by adding more wireless bases and a Sonetics intercom.

Features	SC4 Package Includes
<ul style="list-style-type: none"> • Range – up to 400m from base depending on installation • License free operation • Digitally encoded for secure communications • Up to 40 wireless users can operate in close proximity without interference • Rechargeable LiIon batteries in headsets & belt-packs • Simple 'pair once' base to headset pairing on initial setup • Shift life - 8-10 hours • Power - 12v DC 0.5 amp maximum – can be used in remote areas powered from a vehicle 	 <p>4x Headsets (other options also available)</p>  <p>1x Multi-User Wireless Base</p>

Typical Four User System Configuration






Range measurements in ideal conditions.

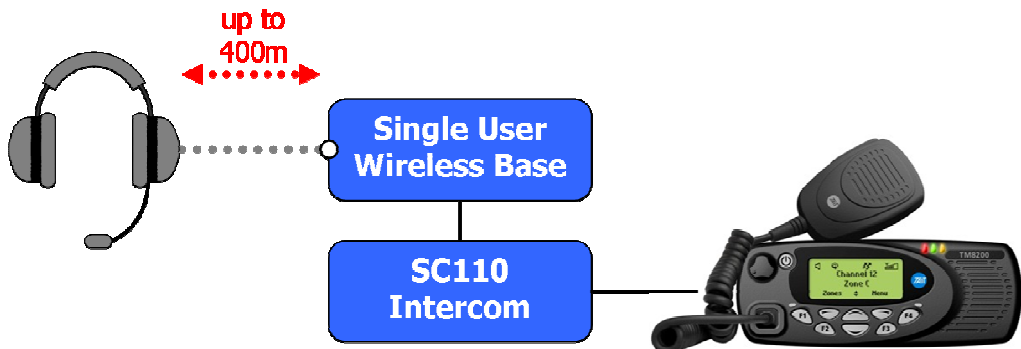
Single User Radio Connected Wireless System

Sonetics Corporation wireless headset systems use license-free radio technology to allow full duplex communication between local teams and radio transmissions via PTT, even in high noise environments. Users have far greater freedom to move and are not restricted by wires or push buttons. Having both hands free improves efficiency and safety whilst providing crystal clear voice communications. All connected users can talk in conference; there is no need to wait for a clear radio channel.

The single user radio connected system enables two way radio communications via the PTT on the headset or belt-pack. The package is comprised of a single-user wireless base, intercom and one headset from a choice of behind-the-head, over-the-head headsets or wireless belt packs (for use with existing wired headsets).

Features	SC1RC Package Includes
<ul style="list-style-type: none"> • Range – up to 400m from base depending on installation • License free operation • Digitally encoded for secure communications • Up to 40 wireless users can operate in close proximity without interference • Rechargeable LiIon batteries in headsets & belt-packs • Simple 'pair once' base to headset pairing on initial setup • Shift life - 8-10 hours • Power - 12v DC 0.5 amp maximum – can be used in remote areas powered from a vehicle 	<div style="text-align: center;">  <p>1x Headset (alternative headsets also available)</p> </div> <div style="display: flex; justify-content: space-around;"> <div style="text-align: center;">  <p>1x Sonetics 110 Intercom</p> </div> <div style="text-align: center;">  <p>1x Single-User Wireless Base</p> </div> </div> <p style="text-align: center;"><i>*Radio interface cable NOT included.</i></p>

Typical Single User Radio Connected Configuration






Range measurements in ideal conditions.

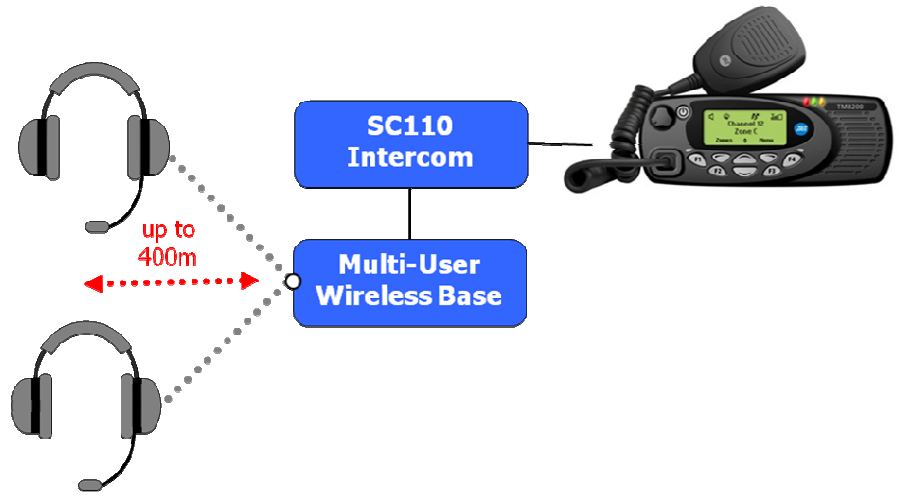
Two User Radio Connected Wireless System

Sonetics Corporation wireless headset systems use license-free radio technology to allow full duplex communication between local teams and radio transmissions via PTT, even in high noise environments. Users have far greater freedom to move and are not restricted by wires or push buttons. Having both hands free improves efficiency and safety whilst providing crystal clear voice communications.

The two user radio connected system allows full duplex communications between both users and two way radio communications via the PTT on the headset or belt-pack. The system is comprised of a multi-user wireless base, intercom and four headsets from a choice of behind-the-head, over-the-head headsets or wireless belt packs (for use with existing wired headsets).

Features	SC2RC Package Includes
<ul style="list-style-type: none"> • Range – up to 400m from base depending on installation • License free operation • Digitally encoded for secure communications • Up to 40 wireless users can operate in close proximity without interference • Rechargeable LiIon batteries in headsets & belt-packs • Simple 'pair once' base to headset pairing on initial setup • Shift life - 8-10 hours • Power - 12v DC 0.5 amp maximum – can be used in remote areas powered from a vehicle 	 <p>2x Headsets (other options are also available)</p> <div style="display: flex; justify-content: space-around;"> <div style="text-align: center;">  <p>1x SC110 Intercom</p> </div> <div style="text-align: center;">  <p>1x Multi-User Wireless Base</p> </div> </div> <p><i>*Radio interface cable NOT included.</i></p>

Typical Two User Radio Connected Configuration






Range measurements in ideal conditions.

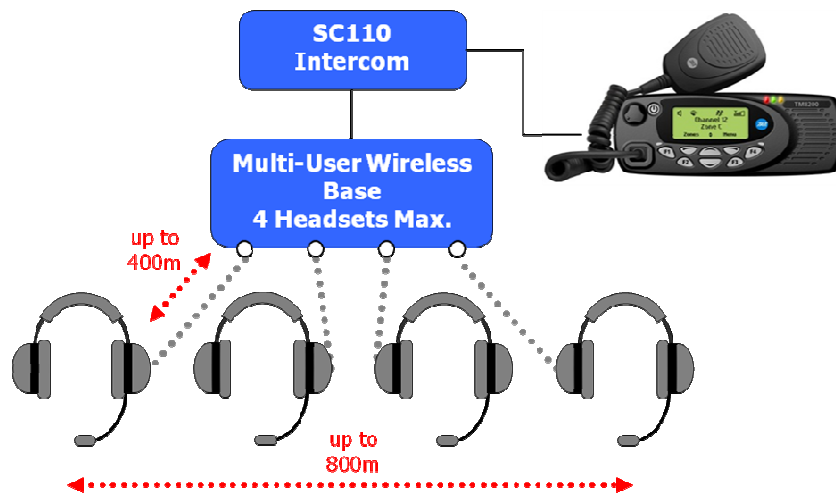
Four User Radio Connected Wireless System

Sonetics Corporation wireless headset systems use license-free radio technology to allow full duplex communication between local teams and radio transmissions via PTT, even in high noise environments. Users have far greater freedom to move and are not restricted by wires or push buttons. Having both hands free improves efficiency and safety whilst providing crystal clear voice communications. All connected users can talk in conference; there is no need to wait for a clear radio channel.

The four user radio connected system allows full duplex communications between all users and two way radio communications via the PTT on the headset or belt-pack. The system is comprised of a multi-user wireless base, intercom and four headsets from a choice of behind-the-head, over-the-head headsets or wireless belt packs (for use with existing wired headsets). System expansion to add up to 12x users is possible.

Features	SC4RC Package Includes
<ul style="list-style-type: none"> Range – up to 400m from base depending on installation License free operation Digitally encoded for secure communications Up to 40 wireless users can operate in close proximity without interference Rechargeable LiIon batteries in headsets & belt-packs Simple 'pair once' base to headset pairing on initial setup Shift life - 8-10 hours Power - 12v DC 0.5 amp maximum – can be used in remote areas powered from a vehicle 	<div style="text-align: center;">  <p>4x Headsets (other options also available)</p> </div> <div style="display: flex; justify-content: space-around; align-items: flex-end;"> <div style="text-align: center;">  <p>1x Sonetics 110 Intercom</p> </div> <div style="text-align: center;">  <p>1x Multi-User Wireless Base</p> </div> </div> <p style="text-align: center; font-size: small;">*Radio interface cable NOT included.</p>

Typical Four User Radio Connected Configuration



Range measurements in ideal conditions.


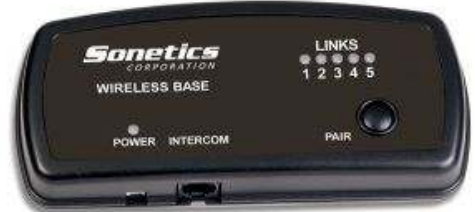
Wireless Headsets

Features	SCFHW-10 Wireless
<ul style="list-style-type: none"> • Over-the-head style • Digitally encoded for secure communications • 26dB NRR • Noise cancelling Electret microphone with adjustable boom • Volume control on earcup • Audible out of range warning • Automatic reconnect after going out of range • Adjustable microphone gain for different ambient noise levels 	
Features	SCUHW-10 Wireless
<ul style="list-style-type: none"> • Behind-the-head style - specially designed earcup allows headset to be used with most helmets • Digitally encoded for secure communications • 24dB NRR • Noise cancelling Electret microphone with adjustable boom. • Volume control on earcup. • Liquid-foam ear seals. • Audible out of range warning. • Automatic reconnect after going out of range. • Adjustable microphone gain for different ambient noise levels 	

Specifications

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|---|---|
| <ul style="list-style-type: none"> • 1.8GHz DECT secure wireless communications • Range – up to 400m open field • Interference free for up to 50 headsets in close proximity • Speaker impedance – 32Ω • Noise reduction – 24dB NRR • Noise cancelling microphone – 6dB | <ul style="list-style-type: none"> • 3.7v Lithium Polymer battery • Shift life ~ 10 hours continuous • Charging source – 12v/ 150mA typical • Charge time ~ up to 5 hours • Operating temperature ~ -10°C to +70°C • Weight - SCFHW-10 ~ 550g
SCUHW-10 ~ 500g |
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Wireless Bases

Features	SCWB-SU/SCWB-SU-110 Wireless Base
<ul style="list-style-type: none"> Connects to a single Sonetics wireless headset or belt pack For use with SC110/SC210 or SC30XXR intercoms for mobile radio PTT communication Digitally encoded for secure communications 	 <p>The image shows a black, rectangular wireless base unit. It features the Sonetics Corporation logo and 'WIRELESS BASE' text. There are three indicator lights labeled 'LINK', 'POWER', and 'INTERCOM', and a 'PAIR' button on the right side.</p>
Features	SCWB-MU Multi-User Wireless Base
<ul style="list-style-type: none"> Connects up to 4x wireless headsets or belt packs for full duplex local communications. Use as a stand alone unit for multi-user full duplex and local communications and with intercoms for mobile radio communications Digitally encoded for secure communications 	 <p>The image shows a black, rectangular multi-user wireless base unit. It features the Sonetics Corporation logo and 'WIRELESS BASE' text. There are five indicator lights labeled 'LINKS' with numbers 1 through 5 below them, and 'POWER', 'INTERCOM', and 'PAIR' labels on the bottom edge.</p>

Specifications

- 1.8GHz DECT secure wireless communications
- Range – up to 400m open field
- Interference free for up to 50 headsets in close proximity
- Size ~ 145 (w) x 66 (h) x 29 (d) mm
- Power = 12v DC nominal (11-16v DC)
- Current draw ~ 45 mA

Wireless Belt Packs

SCBP5-10 Belt Pack

- For use with Sonetics wired headsets
- Digitally encoded for secure communications
- PTT for wireless control of mobile radio (in conjunction with Sonetics intercom unit)
- Audible out of range warning
- Automatic reconnect after going out of range
- Complete with durable nylon carry case
- Range up to 400m from wireless base



SCBP3-10 Belt Pack

- For use with any PJ-051 6.35mm (1/4") terminated audio accessory
- Digitally encoded for secure communications
- Volume control
- PTT for wireless control of mobile radio (in conjunction with Sonetics intercom unit)
- Audible out of range warning
- Automatic reconnect after going out of range
- Complete with durable nylon carry case
- Range up to 400m from wireless base



Specifications

- 1.8GHz DECT secure wireless communications
- Range – up to 400m open field
- Interference free for up to 50 belt packs in close proximity
- Size ~ 85 (w) x 95 (h) x 35 (d) mm
- 3.7v Lithium Polymer battery
- Shift life ~ 8 - 10 hours continuous
- Charging source – 12v/ 150mA typical
- Charge time ~ 3 hours
- Operating temperature ~ -10°C to +70°C
- Weight - SCBP3-10 ~ 550g
SCBP5-10 ~ 440g

Headsets for use with Belt Packs

Features	SCUH-10 & SCFH-10
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- 24dB NRR
- Noise cancelling Electret microphone with adjustable boom
- Rugged U-bracket
- Volume control
- For use with **SCBP5-10** belt packs



Features	SCUH-10S
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- Behind-the-head style – one SLOTTED earcup allows ambient noise to be heard
- 24dB NRR
- Volume control
- Noise cancelling Electret microphone with adjustable boom microphone
- For use with **SCBP5-10** belt packs



Features	SCFH-10S
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- Single sided heavy duty headset
- 24dB NRR on earcup side
- Volume control
- Noise cancelling Electret microphone with adjustable boom microphone
- For use with **SCBP5-10** belt packs



SCLW-20	SCLW-50
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- Lightweight single sided behind-the-head headset
- For use with **SCBP3-10** belt packs



- Lightweight single sided behind-the-head headset
- For use with **SCBP3-10** belt packs

Intercoms

SC110 Intercom



- Provides interface between the vehicle mounted mobile radio and single user connected using wireless base.
- Wireless two way radio communications for single user up to a range of 400m.
- Power ~ 12v DC nominal, 40-130 mA

SC210 Intercom



- Provides interface between vehicle mounted mobile radio and two single user wireless bases.
- 2x users can communicate locally in full duplex
- 2x users can communicate wirelessly on two way radio up to a range of 400m
- Power ~ 12v DC nominal, 40-130 mA

SC3010R Intercom



- Provides interface between vehicle mounted mobile radio and up to 4x multi-user wireless bases.
- Allows up to 16x wireless users to communicate in full duplex and control mobile radio.
- Priority port to allow override by one user (e.g. officer in command)
- Includes advanced noise reduction circuitry
- Touch button volume control
- 12-24v DC, 250 – 500 mA

SC3020R Intercom



- Provides interface between TWO vehicle mounted mobile radios and up to 4x multi-user wireless bases.
- Allows up to 16x wireless users to communicate in full duplex and control mobile radio.
- Priority port to allow override by one user (e.g. officer in command)
- Includes advanced noise reduction circuitry
- Touch button radio selection
- Touch button volume control
- 12-24v DC, 250 – 500 mA

SC3010RH Remote Head



- Allows all SC3010R functions to be controlled remotely from a second location on vehicle
- Tilt head bracket included
- Can be mounted up to 30m away from main base unit

SC3020RH Remote Head



- Allows all SC3020R functions to be controlled remotely from a second location on vehicle
- Tilt head bracket included
- Can be mounted up to 30m away from main base unit

*Adjustable tilt bracket also available for both remote heads.