

# Wireless Base Station 1-User and 4-User Operation Manual



***Sonetics***  
CORPORATION

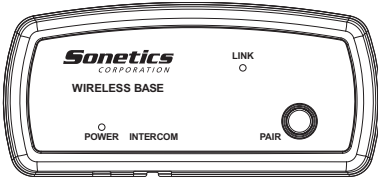
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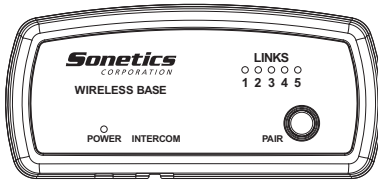
# BASE STATION MODELS



Single Headset Base Station

## 1-User Base Station, 30XXR Intercom Compatible

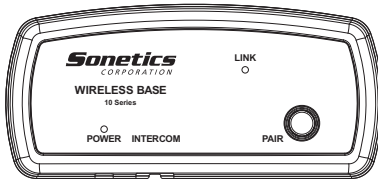
This model accommodates a single Sonetics radio transmit wireless headset or single wireless belt pack. The base station can be connected via a 6 conductor flat cable to any headset port in Sonetics' 30XXR series intercoms. The base station will provide full duplex audio and PTT communication between the wireless headset or belt pack and the intercom and radio.



Multiple Headset Base Station

## 4-User Base Station, 30XXR Intercom Compatible

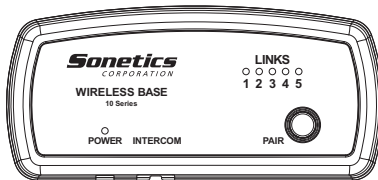
This model accommodates up to five Sonetics intercom only wireless headsets<sup>1</sup> or wireless belt packs. The base station can be connected via a 6 conductor flat cable to any headset port in Sonetics, 30XXR series intercoms. The base station will provide full duplex audio communication between the wireless headsets or belt packs and the intercom.



Single Headset Base Station

## 1-User Base Station, Sonetics, 10 Series Intercom Compatible

This model accommodates a single Sonetics radio transmit wireless headset or single wireless belt pack. The base station can be connected via a 6 conductor flat cable to any headset port in Sonetics' 10 Series intercoms. The base station will provide full duplex audio and PTT communication between the wireless headset or belt pack and the intercom and radio.



Multiple Headset Base Station

## 4-User Base Station, Sonetics, 10 Series Intercom Compatible

This model accommodates up to five Sonetics intercom only wireless headsets<sup>1</sup> or wireless belt packs. The base station can be connected via a 6 conductor flat cable to any headset port in Sonetics' 10 Series intercoms. The base station will provide full duplex audio communication between the wireless headsets or belt packs and the intercom.

# VEHICLE INSTALLATION

- It is recommended that the base station be mounted high inside the vehicle, but not within 4" of any metal<sup>3</sup>. The base station should be attached to a flat surface with 1/4" thick, double-sided tape, to help insulate the base station from the cold. When mounted vertically, the base station should be oriented so that cables into the base station are connected from the bottom, not the top of the enclosure so as not to provide a water path into the enclosure.
- Connect nominal 12V (11-16V) from the vehicle to the base station using the power cable provided. The base station can be connected to the vehicle power line and ground at any location on the vehicle, without risking undesired effects such as ground loops, etc. Connect the black wire to the vehicle's ground and the red wire to the vehicle's 12V power. When wiring to the base station follow the "Fuse Assembly Installation" instructions below.
- Plug one end of the enclosed 6P6C RJ-12 modular communication cable into the RJ-12 jack on the base station and the other end into any headset port on the intercom<sup>4</sup>.

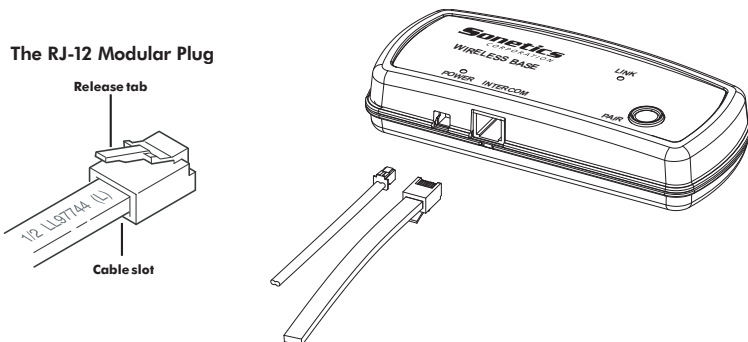
## NOTICE: FUSE ASSEMBLY INSTALLATION

When using a vehicle power supply to operate the base station, the power cable assembly is connected to the fuse assembly, which is wired to one of the vehicle's fuse box slots using a 1A ATO fuse.

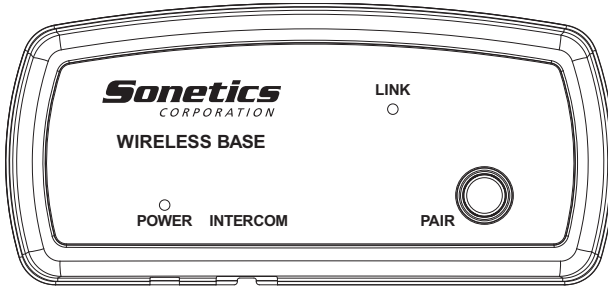
Only use a 500mA fuse in the provided fuse holder assembly.

**NOTE: When crimping the 6P6C modular plugs, always make sure the printed side of the cable is facing the release tab on the plug on both ends of the RJ-12 modular cable.**

- To provide strain relief for the power cable, use a wire tie to tie the modular communication cable to the power cable. Place the wire tie as close to the base station as possible.



# PAIRING

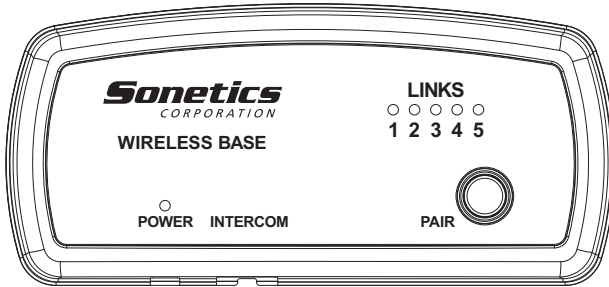


**1-User Base Station**

## **1-user Base Station**

1. When the base station is first powered, the green LED labeled POWER on the front panel will illuminate steadily. The single LINK yellow LED will either stay unlit, indicating that no headset/belt pack has been previously paired to the base, or will start flashing rapidly, indicating that a headset/belt pack has been previously paired to the base station<sup>5</sup>.
2. Press and hold the pair button for approximately 5-7 seconds. The LINK LED will start flashing slowly to indicate that the base station has been placed in pairing mode. The user has approximately 15 seconds to place the headset/belt pack in pairing mode.
3. Place the headset/belt pack in pairing mode; refer to the headset or belt pack series user's manual for pairing instructions. The red and green LEDs on the headset/belt pack will alternate rapidly to indicate that the headset/belt pack is in pairing mode.
4. After about 5-7 seconds, the green LED on the headset/belt pack and the yellow LINK LED on the base station's front panel will flash rapidly for two seconds and then turn on steadily to indicate that a link has been established between the headset/belt pack and the base. At this point, full duplex audio communication between the headset/belt pack and the base station is enabled.

# PAIRING



4-user Base Station

## 4-user Headset Base

The 4-user base station is equipped with 5 yellow LINK LEDs on the front panel. Each LINK LED represents a headset/belt pack with position #1 represented by the left-most LED. The pairing priority starts with position #1 and ends with position #5.

**It is recommended that pairing to new headsets/belt packs is done one headset at a time.**

1. When the base station is first powered, the green LED labeled POWER on the front panel will illuminate steadily. Each of the five LINK yellow LEDs will either stay unlit, indicating that no headset/belt pack has been previously paired to any particular headset slot, or will start flashing rapidly indicating that a headset/belt pack has been previously paired to a particular headset slot<sup>5</sup> but is not currently linked.

**NOTE: If any headsets/belt packs have been previously paired to the base station and the intent is to keep them paired, then these headsets/belt packs must remain turned on and linked in steps 1 through 3 of this procedure. An active link to a headset/belt pack is indicated by the respective LINK LED on the front panel of the base station being steadily illuminated.**

2. Press and hold the pair button for approximately 5-7 seconds. The respective LINK LEDs for any headset/belt pack that is currently linked to the base station will remain steadily illuminated. However, LINK LEDs for vacant slots and for occupied slots with no actively linked headset/belt pack will start flashing slowly to indicate that the base station has been placed in pairing mode and that these slots have been made available for pairing. The highest priority slot will be assigned to the unit currently being paired. Once the base station is placed in pairing mode, the user has approximately 15 seconds to place the headset/belt pack in pairing mode.

## PAIRING

3. Place the headset or belt pack in pairing mode; refer to the applicable user's manual for information regarding how to put the unit in pairing mode. The red and green LEDs on the headset/belt pack will alternate rapidly to indicate that the unit is in pairing mode.
4. After about 5-7 seconds, the green LED on the unit and the respective yellow LINK LED on the base station's front panel will flash rapidly for two seconds and then turn on steadily to indicate that a link has been established between the unit and the base. At this point, full duplex audio communication between the unit and the base station is enabled.

**Note:** It is only necessary to pair a headset/belt pack to a base station once. After that, if power is turned off to the headset/belt pack or base station, the pairing settings will not be lost in either the headset or the base, as those settings reside in permanent memory on both devices.

### Footnotes

- 1- Five headsets/belt packs can be paired to a 4-user base station, but only four headsets/belt packs can be connected and communicated through the base at any given time.
- 2- Under certain site conditions, it may be possible to operate up to 50 headsets or belt packs in close proximity.
- 3- Due to the excellent coverage range the wireless system provides, the base may be mounted in different locations inside the vehicle (where applicable), such as the top surface of the dashboard close to the front windshield. Care should be taken when the base station is mounted in such locations in order to ensure that the base station and its wiring are not damaged due to accidental bumping or piling up of additional working gear.
- 4- In the case of the radio transmit 1-user base station, if transmit priority is desired, then the communication cable from the base station should be plugged into the port marked PR.
- 5- If the LINK LED flashes rapidly at power up, then a headset or belt pack has been previously paired to the base. The previously paired unit will not need to be paired again to the base station and turning the power on to the unit will make it link to the base station.



# TROUBLESHOOTING

When properly located, installed and powered, the base station will perform reliably.

**Note:** If the symptoms you are experiencing are not covered in this manual, or if you are having difficulty troubleshooting your system, contact Sonetics for assistance or see [www.soneticscorp.com](http://www.soneticscorp.com) for additional information.

**Problem: No indication of power to the base station (green power indicator does not illuminate).**

- Check wiring and fuse assembly to the base station.

**Problem: No audio communication and/or PTT from or to the base.**

- Ensure that power is turned on to the wireless unit(s) and that the unit(s) are connected.
- Ensure that the modular communication cable is connected between the base station and intercom.
- Check the modular communication cable between the base station and intercom for continuity.
- Ensure correct polarity of the 6P6C plug on both ends of the modular cable (refer to "Installation" section).

**Problem: Poor quality audio, low or distorted received or transmitted audio.**

- Ensure that the volume level is properly adjusted on the intercom. For 30XXR series intercoms, it is recommended that the volume level is set as high as possible on the intercom without causing distorted audio on the headset side, and that the volume control on the headset is adjusted for comfortable listening.
- Poor quality audio can also be caused by a defective headset. Check operation with a known, well functioning headset in order to determine whether the problem is attributed to the base station.
- Ensure that the proper base station model for your intercom is used.

**Problem: Audible interference from portable and mobile radios.**

- The wireless system is tested and proven to be immune to interferences from portable and mobile communication equipment operated anywhere in the frequency spectrum from 30MHz to 18GHz. However, care should be taken with installation of communication cables between the intercom and the base station. These cables should be routed away from portable and mobile radios and antenna cabling in order to prevent RF interference from such devices.

**Problem: Poor coverage range.**

- Check location of the base station on the vehicle (if applicable). The base station should not be installed inside metal enclosures or any other location closer than 4 inches to a metal object or surface.
- Poor range can also be caused by a defective headset or belt pack. Check operation with a known, well functioning headset/belt pack in order to determine whether the problem is attributed to the base station.

# SPECIFICATIONS

## Electrical:

- Power: Nominal 12V (11-16V)
- Current draw: 45mA average, 80mA peak
- Reverse voltage protection
- Immune to ESD and transients per SAE standard J1113

## Mechanical:

- Dimensions: 14.48cm L x 6.6cm W x 2.90cm H
- Weight: 0.120Kg

## Environmental:

- Operating temperature range: -10 to +70°C
- Storage temperature: -25 to +85°C
- Meets SAE standards J1455
- Chemical resistance, corrosion and humidity per MIL-STD-810

## RF:

- Range: 1500 feet open field.
- Secured digitally encrypted interference-free communications.
- Up to a total of 50 headsets/belt pack combinations connected simultaneously in close proximity.

## FCC/IC Compliance:

This device complies with FCC Part 15 Rules and IC RSS-213 Rules. Operation of this device is subject to the following two conditions:

1. This device may not cause harmful interference.
2. This device must accept any interference that may be received, including interference that may cause undesired operation.

## FCC/IC RF Exposure Warning:

- This product complies with FCC radiation exposure limits set forth for an uncontrolled environment.
- To comply with FCC RF exposure requirements, the base unit must be installed and operated 20 cm (8 inches) or more between the product and all person's body (excluding extremities of hands, wrist and feet).
- This product may not be collocated or operated in conjunction with any other antenna or transmitter.

**Changes or modifications not expressly approved by Sonetics can void the user's authority to operate the equipment.**

# WARRANTY

## One-Year Limited Warranty to the Original Purchaser

Sonetics Corporation warrants to the original purchaser of its products, that they will be free from defects in materials and workmanship, under normal and proper use, for the period of one year from date of purchase. Sonetics Corporation will repair or replace, at its option, any parts showing factory defects during this warranty period, subject to the following provisions. This warranty applies only to a new product which has been sold through authorized channels of distribution. All work under warranty must be performed by Sonetics Corporation. All returned products must be shipped to our address, freight prepaid, accompanied by a dated proof of purchase. The purchaser voids this warranty if he, she or others attempt to repair, service or alter the product in any way. This warranty does not apply in the event of accident, abuse, improper installation, unauthorized repair, tampering, modification, fire, flood, collision, or other damage from external sources, including damage which is caused by user replaceable parts (leaking batteries, etc.). This warranty does not extend to any other equipment or apparatus to which this product may be attached or connected. The foregoing is your sole remedy for failure in service or defects. Sonetics Corporation shall not be liable under this or any implied warranty for incidental or consequential damages, nor for any installation or removal costs or other service fees. This warranty is in lieu of all other warranties, express or implied, including the warranty of merchantability or fitness of use, which are hereby excluded. To the extent that this exclusion is not legally enforceable, the duration of such implied warranties shall be limited to one year from date of purchase. No suit for breach of express or implied warranty may be brought after one year from date of purchase.

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