

Quail  
digital

Pro10

# Pro10 Headset System

Installation Manual



This guide specifies how the Pro10 headset system should be installed and commissioned.

The LEDs on the base, registration point and headset use a sequence of colours and pulses to indicate the status of the system and the item, which are explained in this guide.

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# Pre-Installation Procedure

## Tools required to install Pro10 system:

- Phillips screwdriver
- drill with 1/8" masonry bit
- pencil
- tape measure
- 1m patch cable
- Category 5/6/7 network cable
- RJ45 crimp tool
- cable stripper
- network cable tester

## Pro10 system components:

**Q-P10HS** - headset(s) including battery and headband or neckband

**Q-P10BS** - base station(s) with 48v power supply

**Q-P10CH** - 6 port headset charger with 5v power supply

**Q-P10RP** - registration point

**Q-P10SHELF** - shelf for headset charger (optional)

## Step 1 - Charging headsets

Unpack the Q-P10CH charger(s) and Q-P10HS headsets. Power-up the charger(s) using the 5v power supply supplied in the box. The green power light will illuminate. Place the batteries into the headsets (see Appendix A) and place the headsets into the charger ports. The headset LED is blue and will quick-pulse every second if unregistered and pulse every 4 seconds if registered when not charging. They pulse blue once every 10s when charging and then turn solid blue when fully charged. Charging from flat can take up to 4 hours.

## Step 2 - Pre-installation survey

The system will work to specification if the headsets have uninterrupted range coverage in all operational areas asked for by the client, which may require the installation of more than one base station. It's normal practice to exclude plant rooms, lift shafts, cold stores and stair wells from the coverage required. Before installing the equipment, you should confirm the areas that require coverage (inside and outside) with the customer. Note that the battery chargers must be located well within the coverage area, never out of range nor at the edge of range of a base station.

## Step 3 - Locating base stations

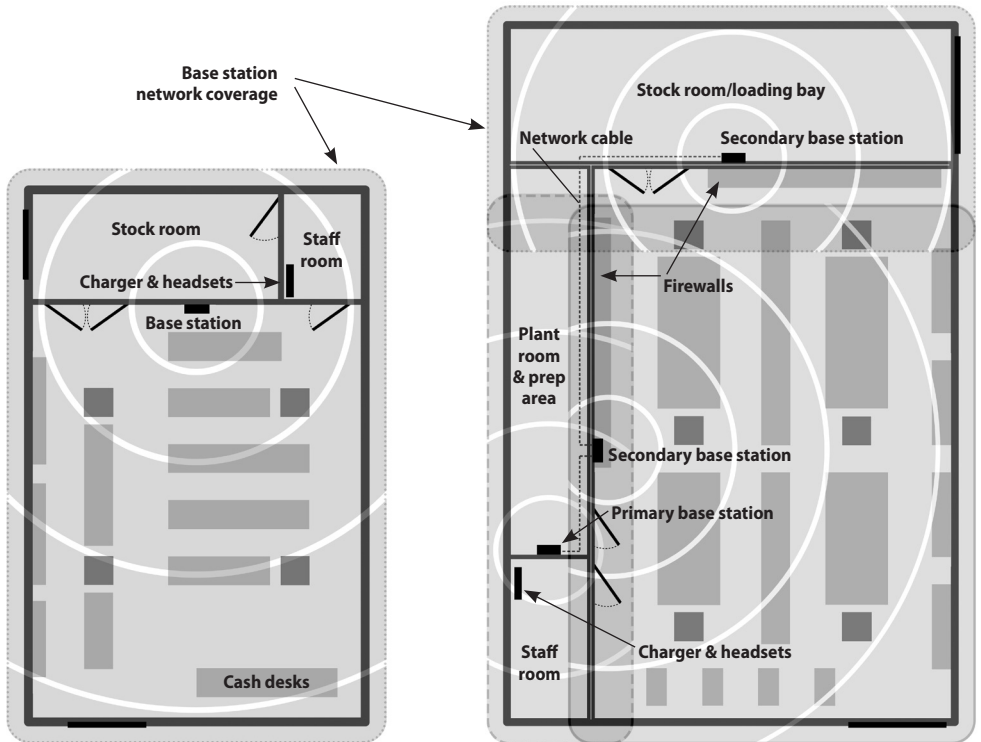
Review Network coverage A and B on page 4, as examples of suggested base station positions in two typical premises layouts.

In Network coverage A, the size of the premise is relatively small and can be covered fully using a single base station, located just outside the main floor area to reduce visual impact. In the Network coverage B example, the premises are much larger and three base stations are required to give full coverage in all areas of the ancillary and main floor spaces.

## Always apply these rules when deciding on locating the base station(s):

- Never place bases in cupboards, behind pipework, above ceilings, above or in cable trays, above lighting networks, around air-conditioning ducts, around electricity control boards and structural metalwork. All of these will significantly reduce range.

- Always locate your base stations so that they have, as much as possible, clear line of sight in the area you want to cover. Any solid wall, doorway, fridge, plant room area or mezzanine floor in immediate proximity in front of the base station will reduce range.
- The base station must be positioned upright on the wall and secured with both attaching screws.
- The base should be located a minimum 3m (9ft) from floor level unless the ceiling is lower, in which case as high as you can.



**Network coverage A - Small store layout**

**Network coverage B - Large store layout**

In **Network coverage A**, a single base is sufficient. The shading shows how the range of a single base covers the whole premises in this instance.

In **Network coverage B**, three bases are required to cover the three separate distinct areas. When planning the positioning of the bases there should be a 5m (15ft) overlap in the signal from two interconnecting bases to allow the headsets to switch between bases seamlessly. If the call drops when moving from one base to another, move them closer together by at least 5m.

#### Step 4 - Conducting your range test

To conduct your range test, you should temporarily locate your first base station in the optimal position you think is correct for delivering maximum range.

Then, temporarily connect the registration point to the base station with a Cat 5 patch cable from the base to the registration point.

Power up the base station using the 48v power supply and an extension cable. Leave it for 2 minutes to boot-up (LEDs on the front of the base station will start amber and then revert to standby mode of red and green). The registration point will start to flash amber and then revert to pulsing green every 10 seconds.

Take a headset and hold the talk button side to the registration point (within 15cm) to register it. The registration point LED will fast blink green and then give a solid green LED for 3 seconds to indicate registration complete. Then hold the headset to your ear. You will hear a single tone in your ear when it has synchronised with the system, which may take several seconds.

Then press the page button to talk and conduct a walk test (you can hear yourself in the headset). When the audio breaks up, you're out of range. Either move the base to another location if you think its coverage could be improved or add additional bases to gain better coverage. If you add additional bases, note where the range of the first base station ends and when you move to the second base station position, remember to allow for 5 metres of cross-over range.

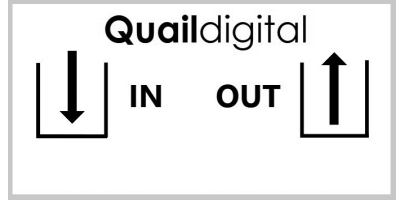


figure 1 - Registration point connections

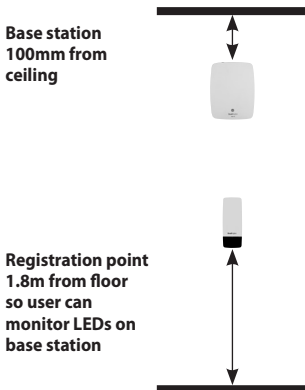


figure 2 - Equipment wall placement

#### Step 5 - Positioning the registration point

Once you've decided on the position of the base station(s), you should position the registration point. It should always be connected AFTER the first base and if there are multiple bases it can be placed anywhere in the chain of bases but always before the last one. To prevent tampering, it's recommended to locate the registration point in a staff-only area. It needs to be accessible to the users, so should never be more than 1.8m above floor level and must be in range of a base station. (see figure 2).

# Installation Procedure

## Step 6 - Installing base stations and registration point

Once you're confident that the bases are well sited, you should start your installation.

Use the cardboard templates provided in the base & the registration point boxes to mark the wall with the correct fixing position.

Place the base station(s) at least 3m (9 ft) from finished floor level FFL (figure 2). The higher the better, but NEVER above ceiling tiles.

A 24hr continuous power socket should be provided close to the position of the first base.

A single power supply will be enough for two bases plus the registration point over a maximum of 200 metres Cat5 cable length. If your installation requires more than two bases (plus the registration point), a second 24hr continuous power supply should be provided in the line (see figure 3)

Note: power supplies can be located anywhere in the chain (i.e. any base can take the power feed).

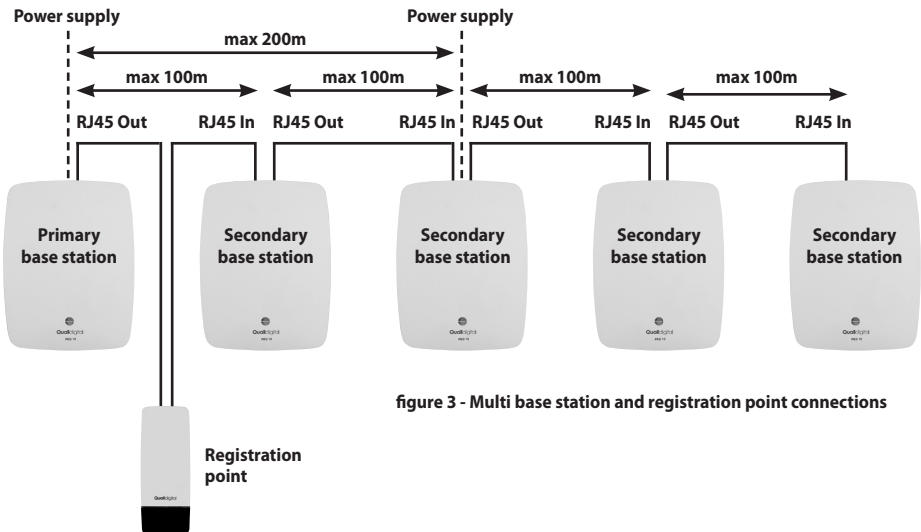
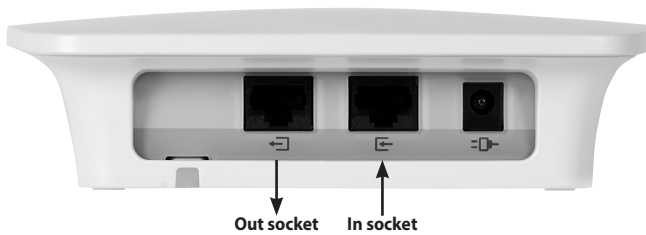


figure 3 - Multi base station and registration point connections

## Step 7 - Connecting base stations and registration point

Daisy chain base stations together with Cat5 network cables (figure 3). The initial base station will have a network cable connected to the 'network out' RJ45 socket and the last in line will only have a connection on its 'network in' RJ45. The beginning and end of the daisy chain. The registration point forms part of the daisy chain and is connected in the same way as the bases.

When using Cat6 or Cat7 network cable you should install faceplate RJ45 sockets and connect to the bases with patch leads. Terminating Cat6 or Cat7 cable with RJ45 plugs is notoriously difficult and can result in poor terminations. If you're using Cat5 cable, follow the terminating guide in figure 4.

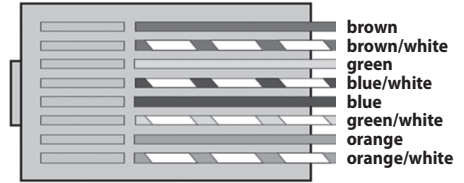


figure 4 - Type B RJ45 termination colour code

Figure 3 illustrates how the bases and registration point interconnect. Connect the 48v power supply from a single socket outlet, powered 24hrs a day. Note the LED colours on the primary and secondary bases. The primary shows red and green LEDs. The base station without a data cable going into the RJ45 'IN' socket always defaults as the primary base. The bases with a data cable in the 'IN' and 'OUT' ports automatically default to being secondary bases. They show two green LEDs.

## Step 8 - Synchronising base stations

As you connect the Cat5 cables to the bases they will power-up and start to synchronise. Their LEDs will turn AMBER and then RED/GREEN if it's the primary base and GREEN/GREEN if it's a secondary base. The registration point LED will also start AMBER and then pulse GREEN. When you've connected the bases and the registration point, and the LEDs have illuminated, the system needs to run through the synchronisation process. To start the process, press the sync button on the underside of the registration point for 15 seconds.

The LEDs on all the bases and registration point will flash AMBER again to start with. It will then repeat the colour changes described below. The process could take up to 10 minutes. Once completed, the system is synchronised and ready to use.

NOTE: If the registration point LED turns RED immediately it means you've connected it incorrectly in the chain. There must be cable from the OUT of a base into the IN of the registration point.

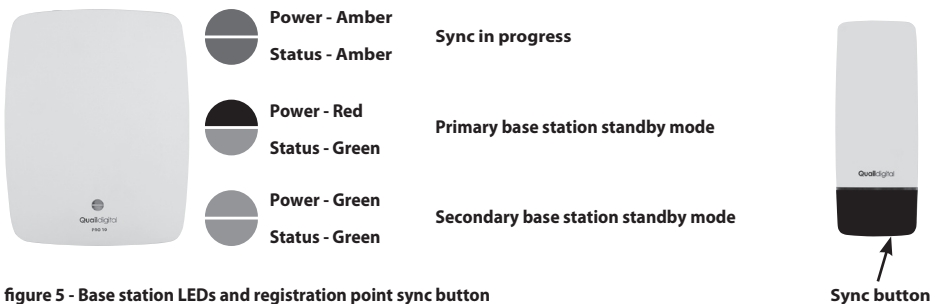


figure 5 - Base station LEDs and registration point sync button

## Step 9 - Setting up the charger

The Q-P10CH charger(s) are likely to be located in the staff room, manager's office or other back-office area always ensuring that the headsets remain in good range of a base station. The charger(s) can be wall mounted on a shelf (Q-P10SHELF).

The charger uses the 5v Q-PSU5 power supply. The green LED indicates that the charger is powered on.

Headset LEDs pulse blue every 10 seconds while charging. The LED turns solid blue when fully charged. Batteries are fully charged from discharged in about 4 hours.



## Step 10 - Registering headsets

**To register the headsets follow this procedure:**

- Make sure all the headsets you wish to register have a charged battery inserted and the LED is flashing blue. Flashing blue every second indicates that the headset is not registered.
- One at a time hold each headset just in front of the registration point, the flashing LED on the headset facing the registration point. The registration point LED will fast-flash green and then turn solid green for 3 seconds to signify registration of that headset is complete.
- Give the headset a couple of seconds to settle. You'll hear a single tone in your ear. Press to talk, speak, and hear yourself.
- The headset LED pulses once every 4 seconds when registered and in normal stand-by mode. If the LED flashes quicker, every second, it means the headset isn't registered, so repeat the process.
- Once registered and audio checked place the headset back in the charger for a few minutes to synchronise with the wider system.
- Repeat the process until all the headsets are registered.
- If you are adding headsets to a system that's already in use, you can run this process even when people are using other headsets at the time.

### **Note:**

1. If you present a headset but the registration point doesn't start to fast-flash GREEN it means that the headset is already registered to that system, so no further action needed on that headset.
2. If the registration point LED fast-flashes GREEN and then turns solid RED, it means that there's a problem initialising the headset, put it aside and try again. If it continues, see headset fault guide.
3. If the registration point LED flashes AMBER>RED it means that the headset is programmed to a different set of global frequencies and will need to be returned to your service provider.

## Step 11 - Testing the installation

Once all headsets have been registered onto the system conduct a final full range test using 2 people with headsets. You should walk slowly through all areas on all floors to confirm uninterrupted communication with the other headset wearer.

As you move round the store, go to each base station. Look up. When you push the page button on the headset the status LED on the base station you're standing close to will flash. This signifies that it has picked up your headset signal, and therefore is working properly. Carry out the same check with each base. More detail on headset functionality and troubleshooting are detailed in Appendix B.

## Appendix A – Headset battery fitting

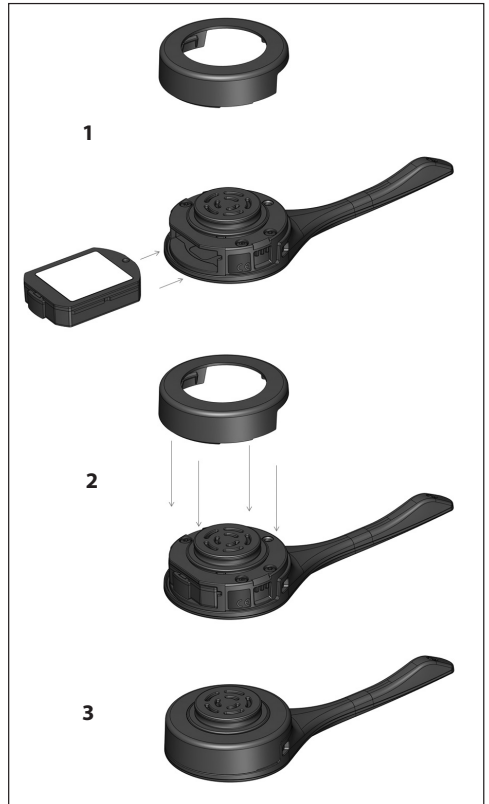
Headsets should always be placed in the charger when not in use. The battery should not be removed from the headset except when being replaced.

### Battery fitting and removal

1. The headset will ship without the battery inserted. Unclip and remove the circular battery cover, there are two small gaps to gently pry the cover off with your nail or a soft plastic lever. Slide in the battery into position.

2. Replace the circular battery cover gently snapping it back into position.

3. Battery removal is the reverse process.

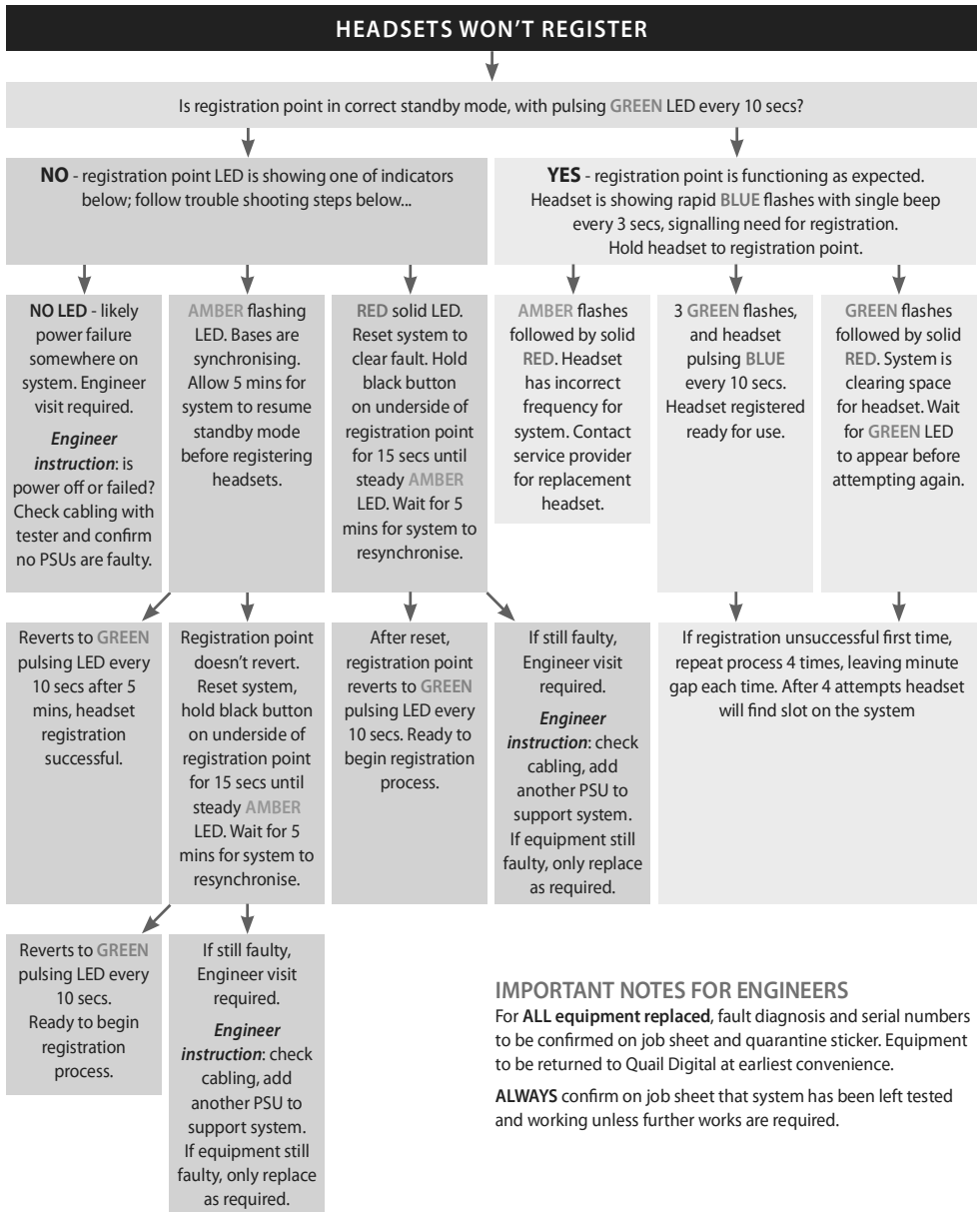


## Appendix B – Headset functionality and system trouble shooting

Headset audio	Status	Next steps
Bloop-bleep	Call drop	Either you've moved out of range of base (move towards it). Or base has no power, check LEDs on front of base. If LEDs out or AMBER, call Tech support.
2 beeps every 10 seconds	Out of range	Headset is not in range of base. Move towards a base OR the base has no power, check LEDs on front of base. If LEDs out or AMBER, call Tech support.
3 beeps every 60 seconds	Battery low	Put headset in charger and take another headset.
1 beep every 3 seconds (and fast flashing LED)	Registration required	Headset is working but needs to be registered on the system.

Fault/symptoms	Action
Headset has been in charger, but LED isn't flashing	Determine whether it's a headset or battery fault. Swap the battery from one in a working headset. If changing the battery clears the fault, then throw away the faulty battery and order a new one. If not, send back for headset repair/replacement.
Headset LED is pulsing as normal every 4 seconds but audio not working	Put the headset back into the charger for at least 10 seconds. This should reset the headset. If it doesn't, remove the battery from the headset then replace it again. If this doesn't clear the fault, send the headset for repair/replacement.
Headsets aren't working in an area they previously did work in	Locate the base serving the area where coverage has gone. Confirm two LEDs on the base are red and green (primary) or both green (secondary). Press the talk button on your headset, the lower LED on the base should flash green. If the LED is amber in colour or doesn't flash green, you have a suspected faulty base station. Call Tech support.

# Trouble Shooting



## IMPORTANT NOTES FOR ENGINEERS

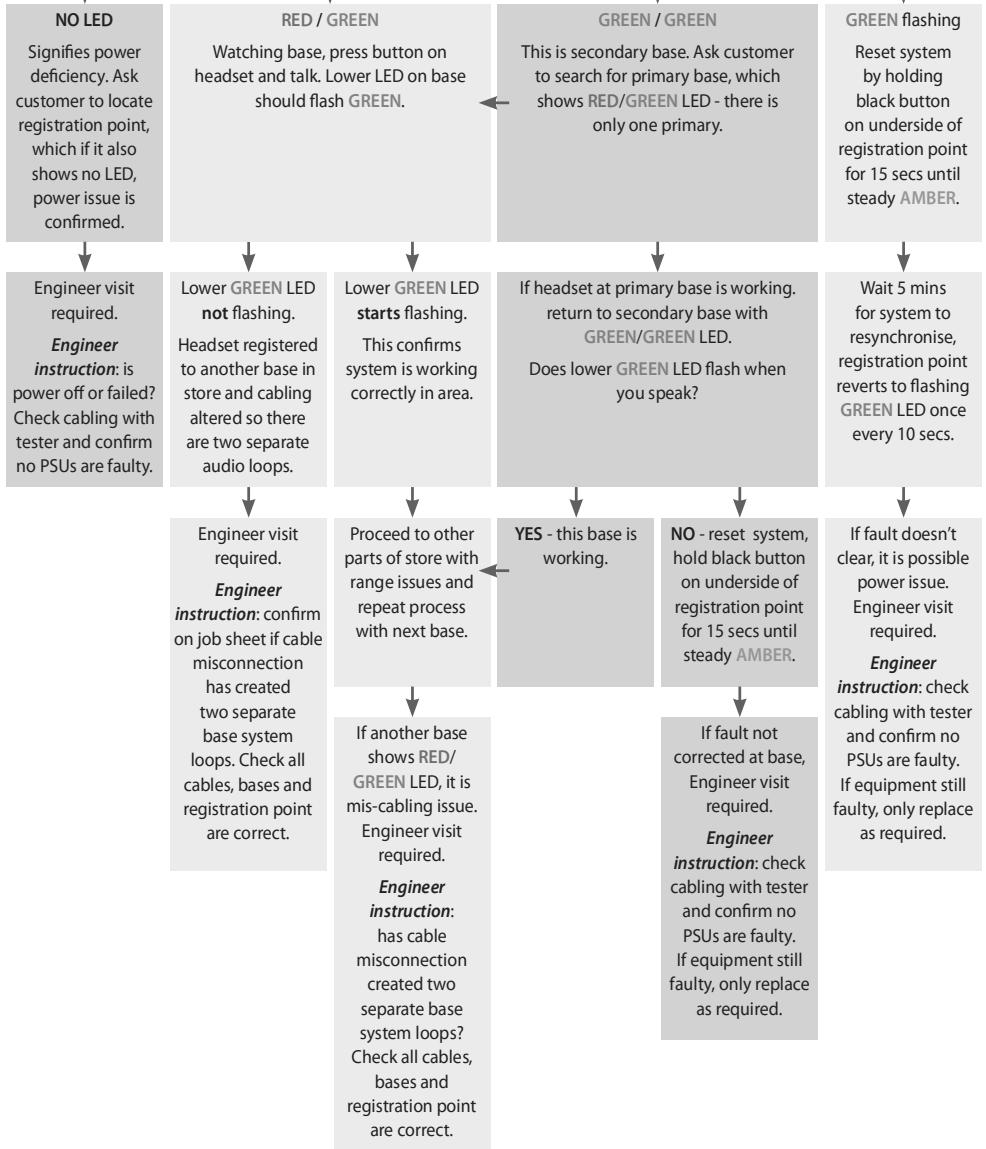
For **ALL equipment replaced**, fault diagnosis and serial numbers to be confirmed on job sheet and quarantine sticker. Equipment to be returned to Quail Digital at earliest convenience.

**ALWAYS** confirm on job sheet that system has been left tested and working unless further works are required.

# Trouble Shooting

## NO HEADSETS WORKING IN PART OR ALL OF STORE

One or more bases have an issue, possibly loss of power, faulty cable, wrongly connected cable, faulty base or PSU.  
Ask customer to locate **closest base to them** and confirm colour of LED on front.



# Trouble Shooting

## ONE OR MORE HEADSETS NOT WORKING

Check battery charger is on and working - is GREEN LED lit on charger? Are headsets in charger solid or slow pulsing BLUE?

**NO GREEN LED on charger**  
Turn off power at socket, wait five mins and turn on again.  
Is GREEN LED lit on charger?

**YES**  
Possible headset fault, follow trouble shooting steps below...

**NO** - is there another working charger? If so, swap PSUs to eliminate PSU fault.

**YES** - put headset back in charger. LED on headset will fast flash BLUE to show charging.

**NO LED on headset** - remove battery, ensure tape not covering contacts, re-insert battery.  
Is LED activated?

Headset LED pulsing BLUE every 4 secs  
Can you hear other people?

Headset LED flashing BLUE every second and beeping twice every 10 secs.

If GREEN LED lit on charger, then PSU faulty. Organise replacement PSU. If LED not lit, charger is faulty.

**NO** - LED on headset after charge.  
Swap battery.

**YES** - pulsing every 4 secs, headset working. Put headset in charger, flashes every 4 secs until solid BLUE LED.

**NO** - put headset in charger for 10 secs, re-confirm if you can hear other people?

**YES** -

**NO** - headset out of range. Walk to area where charger or registration point are located.  
**Now in range.**

**YES** - headset not registered to system. Hold headset to registration point, fast flashes then slow pulse every 4 secs.  
**Ready for use.**

**YES** - headset OK.

**NO**

Headset LED fast flashing, requires registration.

**NO LED**, arrange headset replacement.

**YES** - LED pulsing every 4 secs, headset working. Put headset in charger, flashes every 4 secs until solid BLUE LED.

Can they hear you?

**YES** - speaker faulty, arrange headset replacement.

**NO** - mic faulty, arrange headset replacement.

## Battery replacement schedule

- Batteries are a consumable item and must be replaced every 2 years to maintain the performance and safety of the headset system.
- Each battery is dated with month/year of issue; see the reverse side of the battery for issue date. We recommend that your batteries are retired at two years from the issue date.
- Batteries with missing date information should be considered consumed and replaced.
- You should dispose of spent batteries through approved disposal channels.

Please ask your service agent for details. To purchase replacement batteries, contact: [service@quaildigital.com](mailto:service@quaildigital.com) or your service agent.

## Disclaimer

Quail Digital accepts no liability for injury (in the absence of any negligence or other breach of duty), loss or damage arising from use of its products as a result of a failure to use them in accordance with the relevant instructions of use.

## Regulatory notices

### Headset - HVIN: Q-P10HS

**FCC ID: UDDQP10HS** 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. Changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment. This equipment complies with FCC radiation exposure limits set forth for an uncontrolled environment.

Note: 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 communications. However, there is no guarantee that 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 is connected; Consult the dealer or an experienced radio/TV technician for help.

**ISED ID: 6402A-QP10HS** This device complies with Industry Canada licence-exempt RSS standard(s). Operation is subject to the following two conditions: (1) this device may not cause interference, and (2) this device must accept any interference, including interference that may cause undesired operation of the device.

*L'émetteur/récepteur exempt de licence contenu dans le présent appareil est conforme aux CNR d'Innovation, Sciences et Développement économique Canada applicables aux appareils radio exempts de licence. L'exploitation est autorisée aux deux conditions suivantes:*

*L'appareil ne doit pas produire de brouillage; L'appareil doit accepter tout brouillage radioélectrique subi, même si le brouillage est susceptible d'en compromettre le fonctionnement.*

*This equipment complies with IC radiation exposure limits set forth for an uncontrolled environment. Cet équipement est conforme aux limites d'exposition de radiation IC énoncés pour un environnement non contrôlé.*

### Base Station

**FCC ID: UDDQP7B5** 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. Changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment. This equipment complies with FCC radiation exposure limits set forth for an uncontrolled environment.

In order to comply with FCC and IC RF Exposure requirements, the base station must be installed and operated such that a minimum separation distance of 20 cm is maintained between the base and all persons during normal operation.

Note: 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 communications. However, there is no guarantee that 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 is connected; Consult the dealer or an experienced radio/TV technician for help.

**ISED ID: 6402A-QP7B5** This device complies with Industry Canada licence-exempt RSS standard(s). Operation is subject to the following two conditions: (1) this device may not cause interference, and (2) this device must accept any interference, including interference that may cause undesired operation of the device. *L'émetteur/récepteur exempt de licence contenu dans le présent appareil est conforme aux CNR d'Innovation, Sciences et Développement économique Canada applicables aux appareils radio exempts de licence. L'exploitation est autorisée aux deux conditions suivantes:*

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**Pro10 Headset**

Q-P10HS



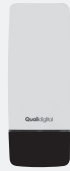
**Pro10 Base Station**

Q-P10BS



**Pro10 Registration Point**

Q-P10RP



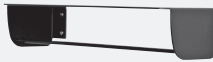
**Pro10 Charger**

Q-P10CH



**Pro10 Charger Shelf**

Q-P10SHELF



**Pro10 Headband**

Q-P10HB



**Pro10 Neckband**

Q-P10NB



**Pro10 Battery**

Q-P10BAT



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