Quail digital

Pro9

Headset System

Installation Manual

Scan to view
Installation Video

This guide specifies how the Pro9 headset system should be installed and commissioned. The LEDs on the base and headset use a sequence of colours, flashes and pulses to indicate the status of the system and the item, which are explained in this guide.

CONTENTS

Preface

Quail Digital Pro9 is a wireless headset system designed to facilitate order-taking in the drive-thru lane of a quick service restaurant. Team members wearing wireless headsets communicate with customers through a remote order point containing a microphone and speaker which activate on arrival of their vehicle at the post. Headset users can communicate with the customers, and on a private channel, with each other. The system uses the internationally approved DECT telephony standard and specification for transmission. Page 31 of this manual lists the Pro9 system components. The sale, installation and support of the product is undertaken by organisations and individuals known to or appointed by Quail Digital.

Introduction

This manual is aimed at the technician level reader who is expected to be familiar with all safety precautions relevant to the use of electrical equipment.

The Pro9 system differs from other drive-thru headset systems as it is digital all the way from the order point to the headset. This improves audio quality, clarity and acts as a shield from external interference.

If you are unfamiliar with Quail Digital products, you are encouraged to watch our training films before you start the installation and to follow the installation steps in the order presented in this guide.

The Pro9 system can be set up in a choice of three modes: Single order taker, Multiple order taker or Dual lane Multiple order taker. The table below explains the different features and you should check your customer's preference before you start. Use the Management Portal to select the desired mode.

Mode choice	Configuration	Order taking	LED status	Detection	Paging
Single lane, Multi order taker	Use in single lane applications only	Any one person takes the call. Single press will engage speaker post. All other headsets hear order.	All headsets double flash GREEN in O/T standby mode.	All headsets hear car arrival.	Paging not available while orders being taken.
Dedicated order taker	In single lane	1 O/T only. Runners hear order taking conversation and can take over call with 2-button process.	O/T double flash GREEN; runner single flash GREEN.	All headsets hear car arrival.	All headsets can page at any time to everyone.
	Additional dual lane features activate when second base is connected	2 O/T only until 'single order taker mode' selected on base, which puts O/T L1 into dual role. All runners hear order taking conversation (both lanes).	O/T L1 double flash GREEN; runner single flash GREEN. O/T L2 double flash BLUE.; runners single flash BLUE.	All L1 headsets hear L1 arrival chime. All L2 headsets hear L2 arrival chime.	Paging is restricted to the lane you are in.
Dual lane, Multi order taker	Use in dual lane applications only	2 O/T dedicated until 'single order taker mode' selected on base, which puts O/T L1 into dual role. AND, any headset can temporarily override and/or take order by single button press L1 or L2. System reverts to previous status after order completed.	O/T L1 double flash GREEN; runner single flash GREEN. O/T L2 double flash BLUE; runners single flash BLUE.	All headsets hear both L1 and L2 arrival chimes.	All paging always goes to O/Ts and runners in both lanes.

Quail Digital uses direct burial Cat5 or ISP 22AWG Belden cable for the link between the order post and the base and always recommends these solutions. Proprietary or recommended cables used by other headset suppliers have been tested with Pro9 and can be used if already in the ground (subject to testing).

What's in the box

- Pro9 Headset (Q-P9HS)
- Pro9 Base Station (Q-P9BS)
- Pro9 Charger (Q-P9CH)
- Pro9 Drive-Thru Module (Q-P9DTM)
- Pro9 Speaker & enclosure (Q-P9SPK)
- Pro9 Microphone & enclosure (Q-P9MIC)
- Acoustic foam (Q-P9FOAM)

(optional items)

- Pro9 Repeater (Q-P9RP)
- Pro9 accessory kit
  - Junction Box (Q-P9JB)
  - Auxiliary Connection Box (Q-P9ACB)
  - Network Termination Box (P9NTEXT or Q-P9NTINT)

Tools, cabling and equipment required

- Small terminal flat blade screwdriver
- Cordless drill
- Tape measure
- Spirit level
- Marker pen
- Cable strippers/diagonal side cutters
- Cat5 cable crimping tool
- Cat5 patch lead
- Cat5 cable tester
- Direct burial specification Cat5 or ISP 22AWG Belden cable
- RJ45 connectors (up to 4)
- Multimeter
- Stepladder
- Laptop or phone for setup

Single lane system overview

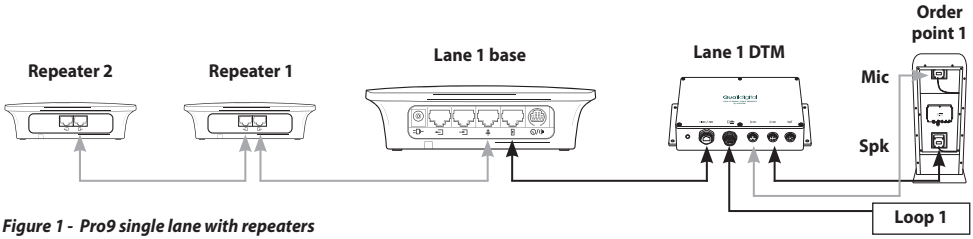


Figure 1 - Pro9 single lane with repeaters

Installation procedure

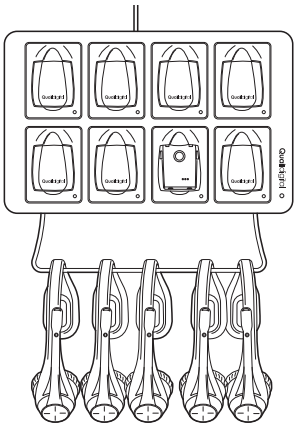


Figure 2 - Pro9 charger

Step 1 The 8-port charger, power supply and metal hanger are in the box (Q-P9CH). Wall mount the charger in the manager's office or other secure location close to a power socket using the template provided in the box. There are two key slots on the rear for mounting and one screw hole under the cap in the third battery slot from the left on the bottom battery row to secure the charger to the wall. Plug in the power supply lead to the charger feeding the cable through the securing gates. Attach the hanging bar before mounting to the wall.

Step 2 Plug the power supply into a mains socket. The power LED bottom right will illuminate RED. Insert each battery into a slot. The individual LEDs will be solid RED when charging and turn solid GREEN when fully charged. On occasion new batteries may get warm during charging. If this happens, the LED will go out and charging will stop to protect the battery until it cools down, this is normal.

Step 3 Remove the microphone (Q-P9MIC) and speaker (Q-P9SPK) from their boxes. The microphone is positioned against the top grill of the order point. Use the silver pre-drilled mounting bracket to fix securely where you can. There should be no gap between the face of the microphone and the grill, and the grill should have as many holes as illustrated in ***Figure 3***. If it doesn't, consider drilling more holes to maximise the effectiveness of microphone.

Step 4 Place the acoustic foam provided around the microphone to provide extra acoustic protection.

Step 5 Use the same procedure as in Step 3 above to mount the speaker against the lower grill.

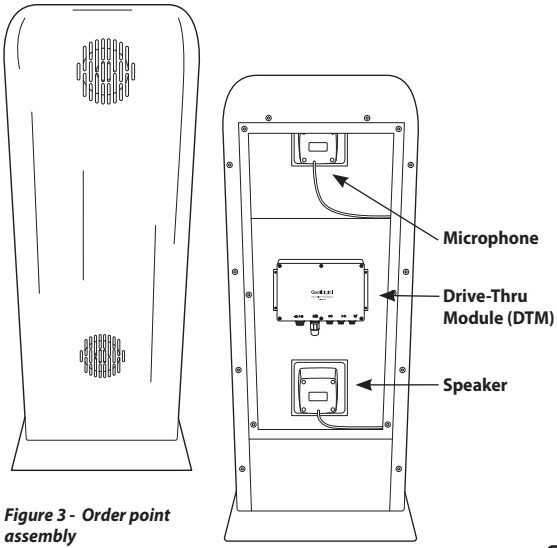


Figure 3 - Order point assembly

Step 6 Fit the Drive-Thru Module (Q-P9DTM) into to the order point using the flanges and four screws. If the DTM does not fit or cannot be mounted in the order point, go to Step 10.

Ensure the DTM is mounted with the cable connections pointing down. Correct orientation in ***Figure 3***.

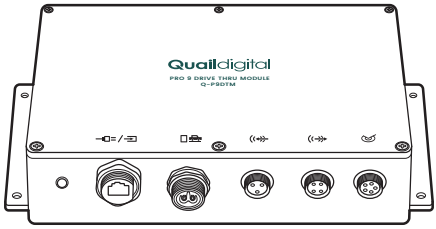


Figure 4 - Pro9 Drive-Thru Module (DTM)

Step 7 Install the cable from the DTM in the order point, through the existing underground conduit(s) to the likely location of the base (Q-P9BS) in the kitchen area. Then, connect both ends of the cable to the internal and external network termination boxes. For Cat5 cabled sites refer to **Appendix A** (page 12).

Step 8 Plug in the black Cat5 cable and the speaker and the microphone to their respective sockets on the DTM as shown.

Step 9 Before connecting the loop to the DTM ensure you have checked the loop lead-in wires for continuity. If this test fails, check/test or replace the loop as required. If the test is successful, proceed to connect loop lead-in wires to the screw terminals of the DTM as shown.

Ensuring the waterproof connector provided is securely fitted, feed the loop cable through and close the connection, as shown in ***Figure 5***.

Note: loop wire twists must be maintained up to the point of connection

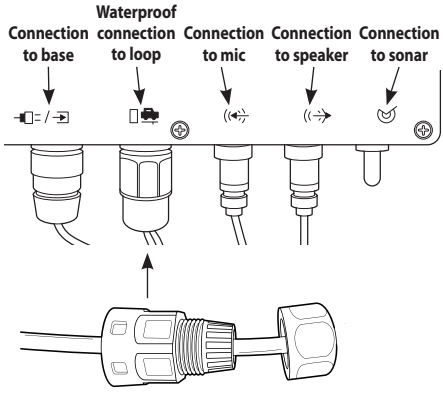


Figure 5 - Waterproof connection to loop

Step 10 If the order point is physically too small to house the DTM or if the ambient temperature in the order point might exceed 40°C (104°F) on a regular basis, the DTM can be located internally. In doing so you will need to cut and remake the speaker and microphone connections using the Junction Boxes (Q-P9JB) - ordered separately. See **Appendix C** for this procedure.

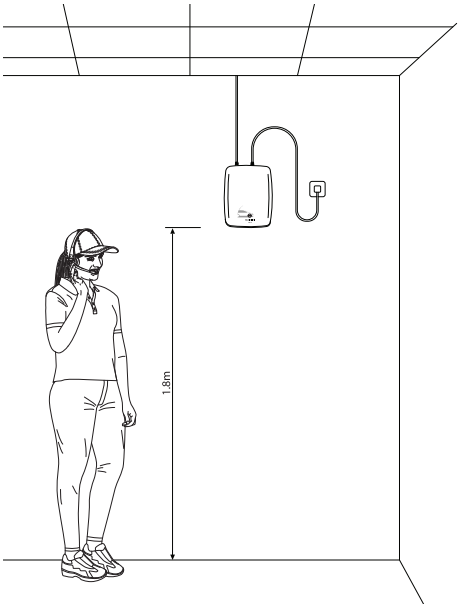


Figure 6 - Positioning the base

Step 11 Choose a location to mount the base with as much clear space around it to optimize the transmission range. Use the template to locate the fixing holes. The power supply should be close by.

If installing a dual lane configuration, please refer to **Appendix E** (page 17) for further information.

Note: there are no user adjustable settings inside the base

Step 12 If there is a lane timer and/or a chime speaker to be connected to the system, refer to **Appendix D**.

Step 13 Plug in the Cat5 cable from the internal junction box (Q-P9NTINT) into the base. On powering up the base, the speaker in the post will beep four times. This is the system carrying out checks to ensure that the speaker and mic are connected properly and operational. The LED will flash AMBER and then turn constant RED when ready and on standby. If the LED is flashing RED or AMBER, see '**Trouble shooting**' on page 27.

Step 14 Now register a single headset to the base to configure the service. Take a charged battery and insert into a headset. The headset will pulse WHITE initially then RED when not registered. Hold the headset to the base as shown. The LED on the end of the boom will fast-flash GREEN during the registration process, then pulse GREEN on and off when registered.

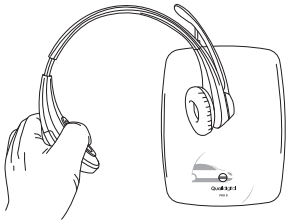


Figure 7 - Registering the headset

Step 15 To test the audio link to the order point, have someone go out to the order point. Press vehicle detection override on the base. The microphone at the order point is live. Press T1 on the headset to talk with the person at the order point. When you've spoken and heard the person outside, the test is done. Press vehicle detection override again to de-activate it.

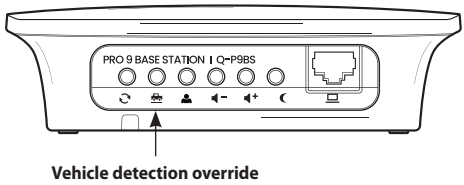


Figure 8 - Testing the audio link

Step 16 Set the road loop sensitivity so the arrival of every vehicle is picked up accurately by the DTM. Identify which vehicle detector PCB is inside the DTM, **A** or **B** as below.

A - vehicle detector PCB

B - vehicle detector PCB

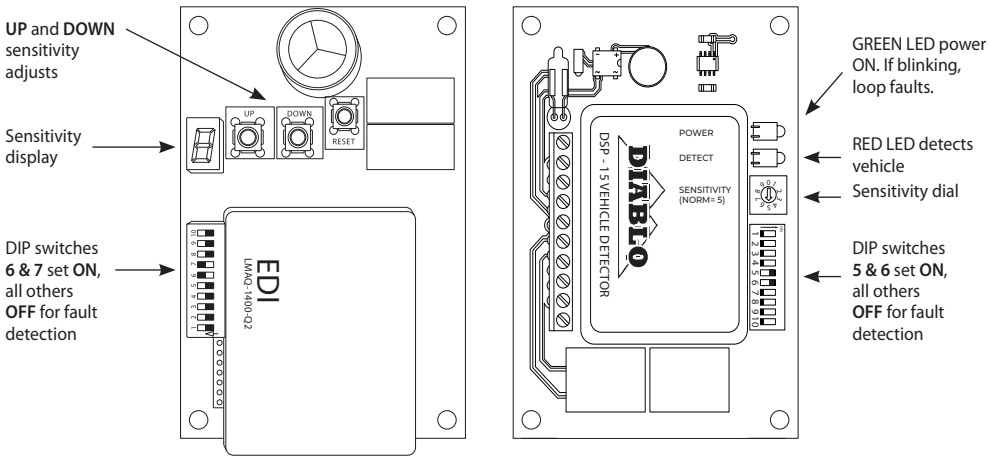


Figure 9 - Vehicle detector PCBs, inside DTM

1. As **A** above, set DIP switches **6 & 7 ON**.

2. Park an average vehicle (not SUV or van) on the road loop at the order point.

3. Adjust the sensitivity display to **5** from any number it is presenting.

3. Drive the vehicle off the loop and check the loop reading returns to **0**; when the vehicle returns back onto the loop make sure the number **5** is displayed.

1. As **B** above, set DIP switches **5 & 6 ON**.

2. Park an average vehicle (not SUV or van) on the road loop at the order point.

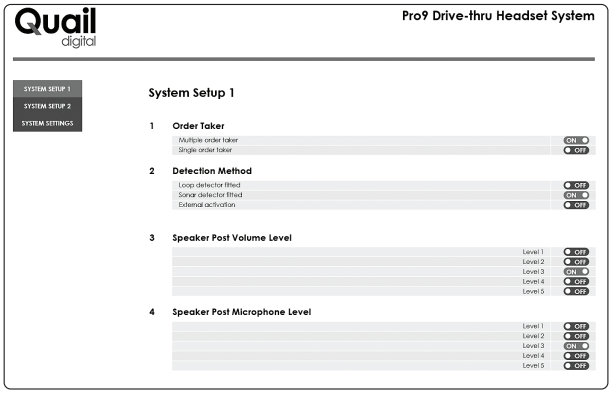
3. The LED will show RED when a vehicle is detected and turn off when it departs.

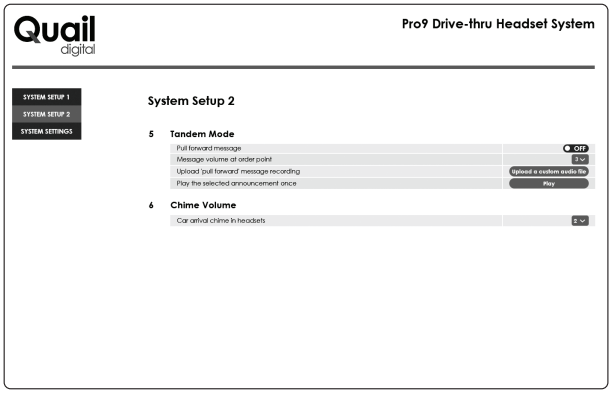
4. Check detection for a variety of vehicles. Adjust the sensitivity dial up or down from default **5**, to cover all vehicles.

Step 17 You will need to go into the Management Portal/GUI to select the user mode, grill speaker preferences, speaker post volume adjustments and other selections. **Appendix H** is the guide to connecting to the Management Portal.

Step 18 First, select the user mode the customer has chosen.

Step 19 Next review the order point volume. The microphone level is pre-set and is unlikely to need adjusting by you, but the outbound volume through the speaker can be adjusted to suit the local environment.





Step 20 Ask someone in a vehicle to drive to the order point. You'll hear a beep in your headset to signify a car is at the order point.

Press **T1** to talk, the headset will go into hands-free mode and the boom LED will go solid GREEN.

While speaking with the person at the order point, ask them if the sound level is comfortable or too loud or too quiet. The default setting is usually fine.

You can change the volume levels for the speaker and microphone as you see fit but be careful to judge whether the change will suit the everyday use of the system once the store is operating.

Step 21 Now explain the headset features to the customer:

In single lane, multi order taker mode: any headset wearer can take an order from the order point when they hear the car arrival beep. A single press of the **T1** button puts the order taker into hands-free mode and the boom LED will go solid GREEN. All other headsets hear the conversation. When the vehicle leaves, the call closes automatically and the LED boom will revert to double pulsing GREEN.

If another user wishes to page other headsets, the user presses ✻. The boom LED turns WHITE while the person is talking; release to listen. When a vehicle is detected the RED LED on the base splits showing GREEN on the bottom half.

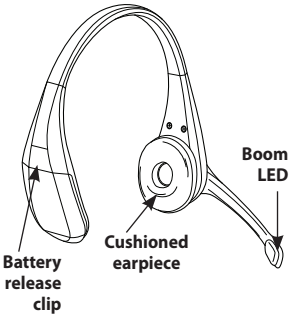


Figure 10 - Pro9 headset

In single lane, dedicated order taker mode: there is one dedicated order taker at any one time per lane. When the battery is inserted into the headset, headsets become runners in Lane 1 as standard, indicated by a single GREEN flash on the boom LED every 4 seconds. The selected order taker will press Lane 1 and Volume **+/–** to become order taker in Lane 1, indicated by a double GREEN flash on the boom LED every 4 seconds.

When a vehicle arrives, all headsets will hear a single beep and the base LED will split between RED and GREEN. To be able to talk to the vehicle, the dedicated order taker should press '**I**'. The GREEN LED on the base will flash when the order taker is speaking. All runners can hear the order takers conversation with the vehicle. The call will automatically drop when the car moves off the loop or can be cancelled by the order taker by pressing '**I**'.

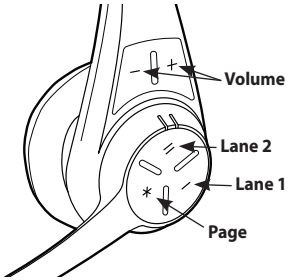


Figure 11 - Pro9 headset

For Dual Lane installation and features go to **Appendix E**.

Step 22 Now show the customer the features on the underside of the base.

If the site needs to reduce the order point volume level at night, they press the night volume button and it stays activated for 8 hours or until they press again. The volume level is reduced by approximately 20%.The GREEN light adjacent to the button indicates night volume is active.

If using a chime/grill ceiling speaker in the kitchen, the volume **V-** and **V+** buttons give manual adjustment to the sound level.

The order taker mode is used in dual lane configurations to move the system from dedicated order taker mode to single order taker mode. The button is pressed again to revert.

The vehicle detection override button is the manual override if the automatic vehicle detection fails. The speaker post microphone will be continuously live so the headsets can hear customer arrival. The speaker post speaker will only activate when the order taker presses their talk button.

The reset button cuts the power and starts a reboot. Press this for 10 seconds, the front light will start to flash GREEN after several seconds, then a short time later turn AMBER. You may now release the button and the system will reboot.

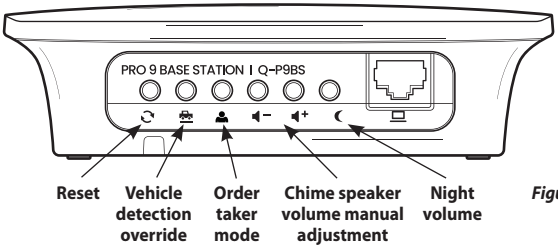


Figure 12 - Base (underside)

Step 23 Once you are satisfied that all GUI settings have been updated, go to ***System Setup 2 Registration*** select ***YES***, then click ***Submit*** to de-register all headsets, so all headsets can be re-registered with all the updated flags and adjustments.

Step 24 Now re-register all headsets.

Appendix A

Refer to the following diagram and wiring table to complete Cat5 cable termination

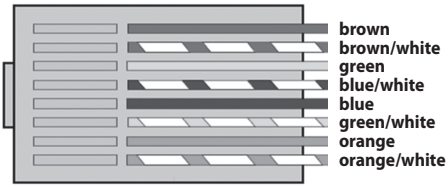


Figure 13 - Type B RJ45 termination colour code for use with Cat5 cable sites

All Cat5 cables terminated during an installation must be tested before use.

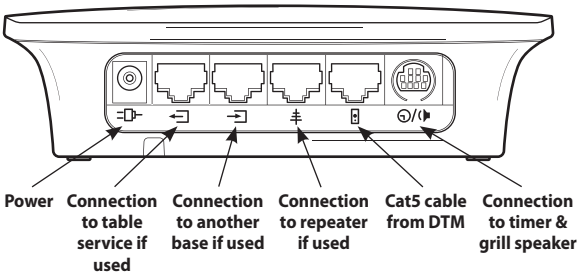


Figure 14 - Connecting to base (top)

Appendix B

Installing Pro9 system using existing cabling to connect the base to the DTM located in the order point (Q-P9NTEXT and Q-P9NTINT)

Using the network termination boxes allows existing cabling to carry digital signals and power on previously installed cabling. Inside each is a small PCB with a network adaptor socket and screw terminals as below. Follow the steps on page 14 to make the correct connections.

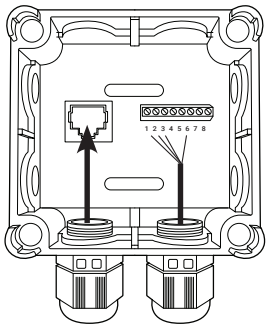


Figure 15 - Network termination box

1. Outdoors, strip back your existing cable and connect into the screw terminals of the external network termination box (Q-P9NTEXT). Follow the colour codes in the table below.

2. Indoors, strip back the other end of your existing cables and connect into the internal network termination box (Q-P9NTINT). Follow the colour codes in the table below.

3. At the order point connect the black Cat5 lead from the Q-P9NTEXT into the DTM.

4. Indoors, connect the white Cat5 lead from the Q-P9NTINT to the base.

5. In the order point connect the microphone and speaker into the connection strip of the junction box as shown following the colour codes.

6. Connect your existing audio cable to section A of the PCB as shown below.

7. Then go to the other end of the audio cable in the building and use the other junction box to attach the speaker and microphone plugs to it.

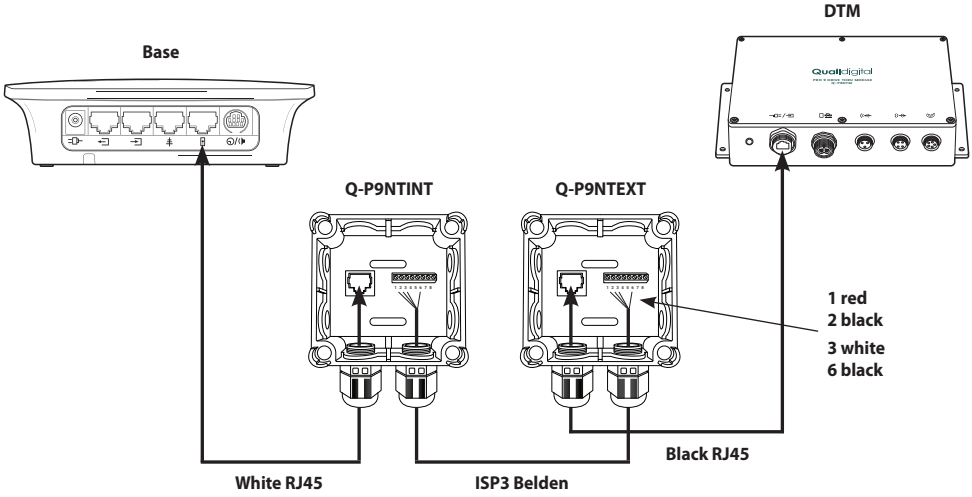


Figure 16 - Connecting using existing cabling to DTM in speaker post

All Cat5 cables terminated during an installation must be tested before use.

	Terminal connection								
Cable type	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**Notes**
Belden 8723 2 Pair	**red**	**black**	**white**	**nc**	**nc**	**green**	**nc**	**nc**	**As used in many DT installations**
Belden 8777 3 Pair	**red (pr1)**	**black (pr1)**	**white (pr2)**	**nc**	**nc**	**black (pr2)**	**nc**	**nc**	**General purpose cable suitable for DT**
3M Cable	**red**	**black**	**white**	**nc**	**nc**	**blue**	**nc**	**nc**	**Specialised cable designed for DT**
Cat 5 Cable	**white/ orange**	**orange**	**white/ green**	**nc**	**nc**	**green**	**nc**	**nc**	**Cat 5 Cable**

Appendix C

Installing Pro9 system using existing cabling to connect the base to the DTM located in the building (Q-P9JB x2)

Using the junction boxes allows existing cabling to be used to carry the audio signals for the speaker and microphone. Inside each is a small PCB with two sets of screw terminals, A and B as shown. Follow the steps below to make the correct connections.

1. Ensure the Quail Digital speaker and microphones are installed at the order point.

2. The installed speaker and microphone are equipped with fixed length cables, factory terminated with DIN connections. The DIN terminated ends of these cables need to be reused indoors to complete the speaker and microphone DTM connections.

3. Cut the cables on both the speaker and the microphone, ensuring there is at least 300mm length on the connector end cables which are used to connect the internal Q-P9JB to the DTM speaker and microphone sockets.

4. Strip the cable of all 4 ends and prepare the cores for connection.

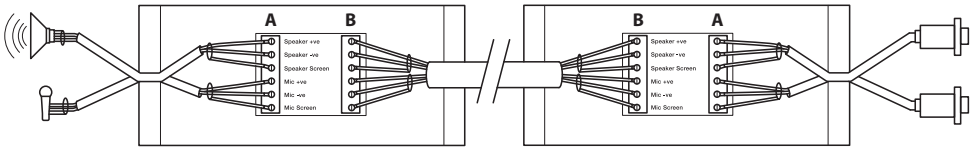


Figure 17 - Connecting using existing cabling to DTM in building

	Terminal connection Connector A						
Installed cable type	**Spk +ve**	**Spk -ve**	**Spk screen**	**Mic +ve**	**Mic -ve**	**Mic screen**	**Notes**
Quail speaker & mic	**red**	**black**	**screen**	**white**	**blue**	**screen**	**Supplied installation options**

	Terminal connection Connector B						
Installed cable type	**Spk +ve**	**Spk -ve**	**Spk screen**	**Mic +ve**	**Mic -ve**	**Mic screen**	**Notes**
Belden 8723 2 Pair	**red**	**black**	**nc**	**white**	**green**	**screen (drain)**	**As used in many DT installations**
Belden 8777 3 Pair	**red (pr1)**	**black (pr1)**	**screen (pr2)**	**white (pr2)**	**black (pr2)**	**screen (pr2)**	**General purpose cable suitable for DT**
3M Cable	**red**	**black**	**nc**	**white**	**blue**	**screen**	**Specialised cable designed for DT**

Note – only screened cable can be used for audio connections.

Appendix D

Pro9 auxiliary connections (Q-P9ACB)

If your system is using a lane timer and/or a chime speaker use an Auxiliary Connection Box and follow these connection instructions:

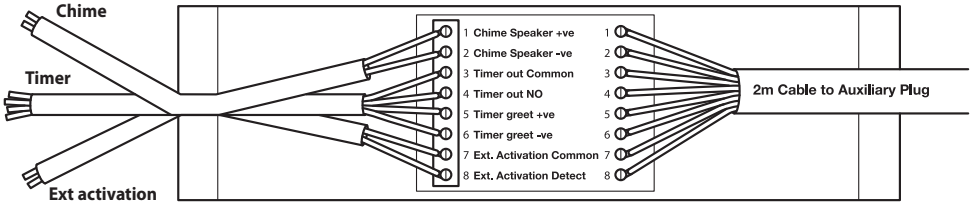


Figure 18 - Auxillary connector box connections

Plug this interface connection unit into the corresponding connector on top of the base.

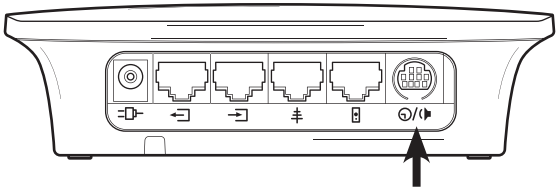


Figure 19 - base (top)

This table provides the information you may require in relation to the auxiliary connections.

Connection	Colour	Description	Notes
1	white	Chime speaker +ve	For connection directly to a speaker to provide a chime on arrival of a vehicle at the order point.
2	red	Chime speaker -ve	
3	blue	Timer out common	0v switch output to provide vehicle detection to OEM timers or other equipment.
4	green	Timer out NO	
5	brown	Timer greet +ve	Simulated voltage output triggered when headset goes live to speaker post. Provides "greet" function to OEM timers.
6	grey	Timer greet -ve	
7	purple	Ext activation common	0v to 12v detection to provide third party activation of the headset system. Typically output from an OEM timer system.
8	yellow	Ext activation detect	

Appendix E

Setting up Pro9 as dual lane/tandem configuration

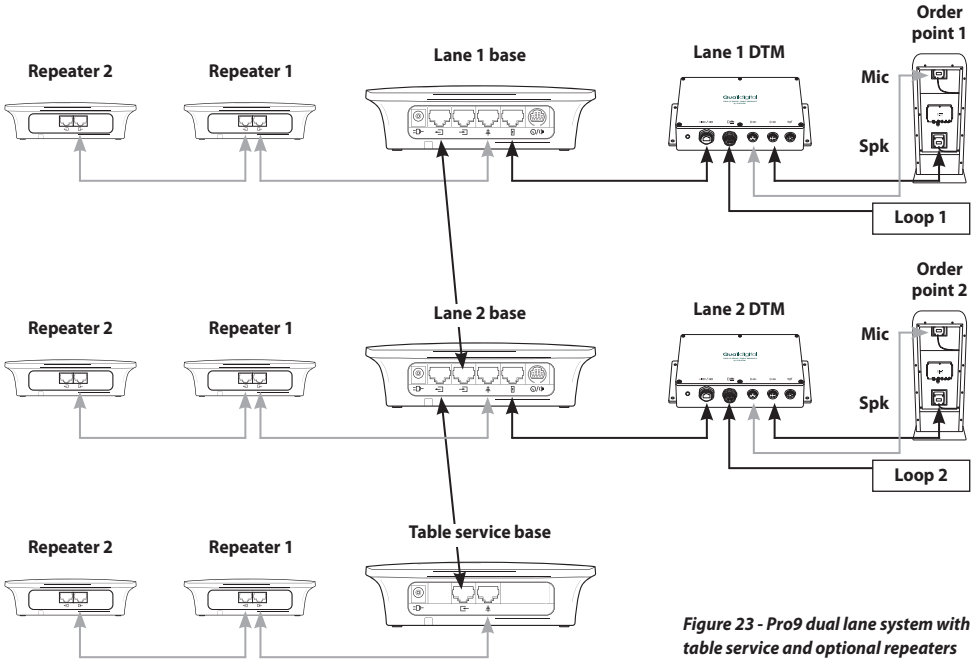


Figure 23 - Pro9 dual lane system with table service and optional repeaters

To configure two order point system, first follow Steps 1 to 13 in this manual. Essentially, treat it as two separate single lane systems for initial installation and set-up. Once you have completed Step 13 follow the instructions below.

Go to **Appendix D** for lane timer and grill speaker auxiliary box connections.

1. Disconnect the power from both bases.

2. Identify which base is connected to the first order point and connect a short Cat5 cable from the **OUT** port of this base to the **IN** port of the second base.

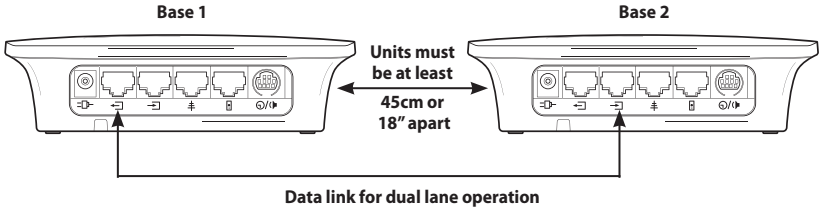


Figure 24 - Connecting dual lane bases

3. Re-connect the power to BOTH bases. The LED on the front of Lane 1 base will turn solid RED. The LED on Lane 2 base will turn solid GREEN.

4. Plug in your laptop and go to the GUI to set up the site profile. First, select the customer's preferred operating mode which will be either a) Dedicated order taker or b) Dual lane multi-order taker. Refer to table below for more detail on features of each mode. NOTE: in tandem lane configuration, there is no 'multiple-order taker' feature. You will be asked to confirm whether the site is operating DUAL or TANDEM lane. If you have selected tandem, you will be required to record a 'Pull forward' message. Please go to **Appendix J** to read how to do that.

5. If the store is using a grill speaker, select the customer's preferred mode (order-taking audio and/or vehicle arrival chime).

6. Note that the settings you select will need to be saved and loaded into both bases. The GUI settings do not port over from one base to the other.

7. After you have uploaded the revised GUI settings follow Step 14 to register a single headset to the system. NOTE: you can use either base to register the headset provided the interlinking data cable is connected, either will accept registration which is then shared to both.

8. Now follow Steps 15-20 in the manual to set up the audio levels at each order point. The setup process is done twice, separately, one for each lane.

9. Once you've finished selecting mode and audio levels and recorded the pull forward message in the case of tandem, press **RESET**. The system is ready to be used and you should explain the headset features to the customer.

10. Register all headsets to the system. The headset LED will flash RED with a single beep every second if unregistered.

11. Once you are happy with your setup, follow the above steps again, however in Step 6 select the 'obtain IP address automatically' to return your computer to normal settings.

Activating Single Order Taking Mode

When you place a battery into a headset at the beginning of the day it always defaults to Lane 1 runner. Review the table below to understand how to move from Lane 1 runner mode.

Figure 25 shows the underside of the base. When pressed, the third button from the left engages 'Single Order Taker' mode, where a single order taker is able to operate both lanes by pressing the relevant lane button when a vehicle arrives.

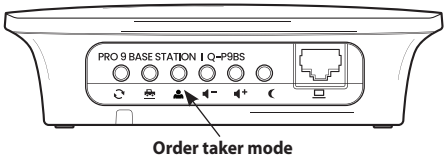


Figure 25 - Additional data socket & function button

NOTE: In the Dual Lane configuration, if the L2 base drops out, L1 base & headsets are unaffected and operate as normal (because L1 is the primary base. If L1 drops out the L2 headsets need to be re-registered to the L2 base because temporarily it has become the primary base). Hold the headset up to base, remove battery > reconnect battery > wait for headset to re-register > start to use. When L1 base is re-established, all headsets need to be re-registered again, and re-select the group they wish to go into.

For tandem lane, it is essential that Order point 2 comes first before Order point 1 in the direction of traffic flow, as ***Figure 26***. The message to 'Pull forward' is played from Order point 2 when there is no vehicle at Order point 1. Order point 1 is always the main order position; Order point 2 is used only during busy times.

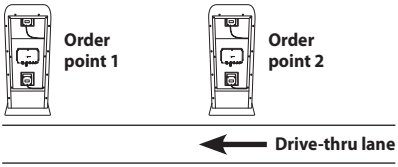


Figure 26 - Tandem lane, order point sequence

DUAL LANE, MULTI-ORDER TAKER						
First step	**Standby**	**Vehicle arrival at order point**	**Paging**	**Take over as order taker**	**After drill thru**	**Paging**
Insert battery, all headsets single flash GREEN as L1 runner.	**To become L1 O/T, press T1 & V+ double GREEN flash. To become L2 O/T, press T2 & V+ double BLUE flash. L2 runners press T2 & P single BLUE flash.**	**All headsets hear vehicle arrival chimes from both lanes.**	**All headsets hear the paging from both lanes.**	**Any headset can drill through and take over as an order taker in either lane by pressing T1 or T2 respectively until you hear the beep. When you hear the beep, you're live.**	**After drill thru to take order, when vehicle leaves the loop you will revert back to the runner mode and group you were in.**	**Press * to talk, release to listen.**

DEDICATED ORDER TAKER					
First step	**Become an order taker**	**Move from Lane 1 to Lane 2 runner, and back**	**Move from Lane 1 to Lane 2 order taker, and back**	**Take over temporarily as order taker**	**Single order taker mode**
Insert battery, all headsets become Lane 1 runners. LED single GREEN flash.	**Lane 1 press Vol- & T1 together, LED double GREEN flash. Lane 2 press Vol- & T2 together, LED single BLUE flash. Repeat process, LED double BLUE flash.**	**Press T1 & T2 together, LED single BLUE flash. Runners hear order taker from the lane they are in. Repeat process to go back to Lane 1.**	**Press T1 & T2 together, LED double BLUE flash. Repeat process to go back to Lane 1.**	**Any headset can take over as order taker. Press/hold T1 or T2, hear beeps, then you are live to customer. Car leaves, you revert to your previous mode.**	**To activate single order taker mode, press on underside of base. O/T 1 can switch between L1 & L2, and all runners will fall back to L1 (single GREEN flashing). In reverse, press base button again and move headset to L2 (follow 2nd column in this table).**

Appendix F

Pro9 repeaters (Q-P9REP)

If the range needs to be increased you can add up to two repeaters which, subject to local conditions, can more than double your headset range.

A repeater is another radio device and is wall mounted like the base. Its power is fed down the Cat5 cable which connects the repeater to the base. There is no need for an additional power supply for the repeater.

Two repeaters can be connected in a daisy chain format to a base (as shown below).

For systems subject to FCC regulations, the total number of bases or repeaters in any system must not exceed 6 units. For example, three bases each with one repeater, or two bases each with 2 repeaters.

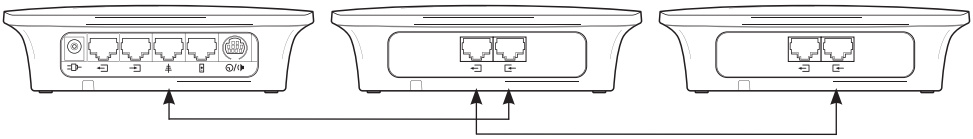


Figure 20 - Increasing range using up to two Pro9 repeaters

1. Putting on a headset walk from the base towards the area you require more coverage and note where you lose connection.

2. Set up the repeater in the area where you need further coverage, connecting the Cat5 cable from the base to the repeater.

3. Check that you have enough coverage for the additional area and that there's full coverage in hand-over zone where you lost range before.

4. Repeat the exercise if you need further increase in range, cabling back the second repeater to the first repeater.

5. When your repeaters are booting up the LED on the front will flash AMBER, and then default to solid GREEN in standby mode.

6. When the repeater is transmitting your headset audio, the LED will pulse GREEN.

7. See 'Trouble shooting' for further guidance (page 27).

Appendix G

Pro9 table service (Q-P9BSTS)

The Pro9 system can be configured to support two drive-thru order points and one table service channel (TS). If the restaurant is using table service, you will require a table service base. The table service base connects to the drive-thru base using a Cat5 cable and uses its own 48v power supply.

Figure 21 - Table service base

The table service base is normally located centrally in the restaurant , providing coverage for seating and preparation areas. Usually, pick a location for the base somewhere between the service counter and the middle of the seating area. If there are multiple floors adjust your placement accordingly and consider adding one or more repeaters.

1. Install a Cat5 cable from the drive-thru base to the position you have identified for the table service base. Once installed use a Cat5 tester to ensure that the cable is correctly wired and tested.

2. Mount the table service base using the template provided as a guide for the screw locations.

3. Plug the Cat5 cable to the 'IN' port of the table service base.

4. Return to the drive-thru base and disconnect the power.

5. Plug in the new Cat5 cable to the 'OUT' socket located on the top of the drive-thru base.

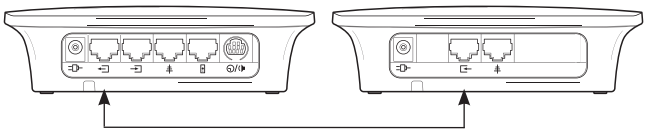


Figure 22 - Connect table service base to drive-thru base

6. Plug the power back into the drive-thru base and table service base.

7. After successful start up the LED on the table service base will be solid AMBER. Headsets should be re-registered to the new configuration now table service is added.

8. Press the 'V-' and the '✻' buttons of the headset together for 2 seconds, the boom LED will pulse yellow, you can then let go of the buttons. You are now in table service mode.

9. Testing. Repeat Step 8 with another headset. Then, using the '✻' button on one of the headsets, the two headsets will communicate between each other.

10. The table service channel is simplex which means you push to talk and release when you've finished speaking. When speaking the boom LED will be solid white.

11. To change your headset from table service to drive-thru press T1 and 'V-' . The boom LED will change from pulsing yellow to pulsing GREEN.

Appendix H

Adjustments in system set up (connecting a computer to Pro9 base)

To make adjustments to the Pro9 system you can connect a laptop directly into the network port on the bottom of the Pro9 base. This Appendix describes the process of making the connection.

This description is based on Windows 10, you may need to alter details to suit your operating system. To provide communications a simple RJ45 network socket on the bottom of the Pro9 base is utilised. Connect a standard Cat5 lead from this socket to the network port of your laptop.

1. Press the Windows button on your keyboard and select the settings cog.

2. Select 'Network and Internet'.

3. Select 'Ethernet', then 'Change adaptor options'.

4. Right click on your ethernet connection and click 'Properties'.

5. Double click on 'Internet Protocol Version 4 (TCP/IPv4)'.

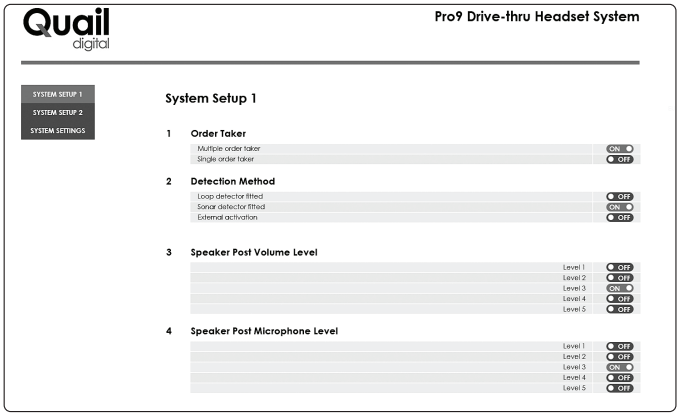
6. Select 'Use the following IP address' and type in the IP address field 192.168.1.1, then in the Subnet mask field type 255.255.255.0

7. Press ok on the open dialog boxes to close them.

8. Open your web browser and type into the address bar 192.168.1.115

9. This will now bring up the Quail API for you to change the settings of the base.

10. Once you are happy with your setup, follow the above steps again, however in step 6 select the 'obtain IP address automatically' to return your computer to normal settings.



Appendix I

Connecting a computer to Pro9 base using a wireless adaptor

To make adjustments to the Pro9 system it is possible to complete this wirelessly using a WiFi repeater/bridge. This Appendix describes the process of making the connection. The use of the interface API is described in the main manual.

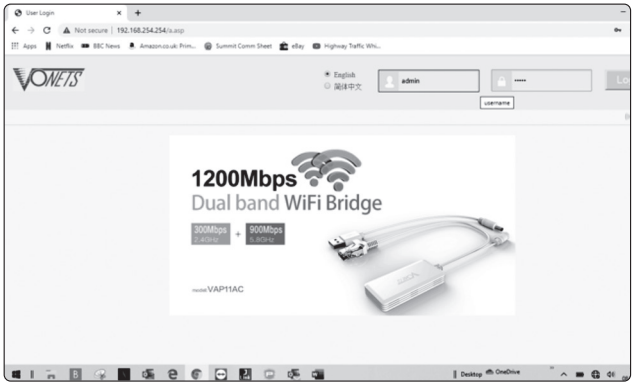
This description is based on the Vonets VAP11G-300 WiFi bridge. This device is a tool for the engineer and once setup can be used on any Pro9 system to connect to the installer API.
http://en.vonets.es/products/VAP11G-300/

1. Unpack the Vonets WiFi bridge and plug the USB into your laptop, just to power the adaptor. Give the unit 30 seconds to start up.

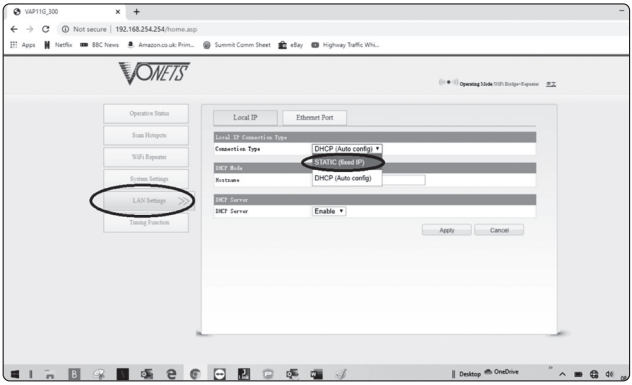
2. Open the WiFi settings of your laptop or phone and connect to the Vonets WiFi network. The password is '12345678'

3. Open a web browser and type in the address '192.168.254.254'

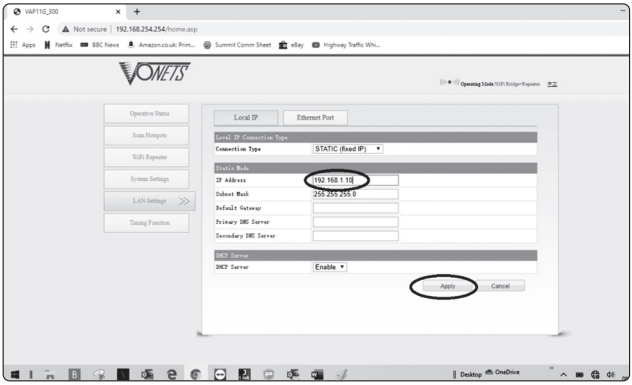
4. On the login page, enter username as 'admin' and password as 'admin', both in lower case.



5. On the next menu, select 'LAN settings' then 'Static IP'



6. In the IP address box, change the address to '192.168.1.10' and click 'Apply'



7. The device will now say 'Please wait'; once this is finished (approximately 10 seconds), unplug the USB from your laptop.

To use the wireless adaptor, you will need a power supply or battery pack to power the unit, a standard USB charger power supply or battery pack will suffice. Once powered, plug the RJ45 into the Pro9 base and open a web browser. Type '192.168.1.115' into the browser and the Quail API will open for you to make alterations to the settings.

Now this device is setup. See Step 18 in the main manual for details of the API.

Appendix J

Recording a 'Pull forward' message

To use Pro9 in a tandem drive-thru you will need to record a 'Pull forward' message to the base for Lane 2. It is good practice to record the same message to both base s in case they are swapped around at a later date.

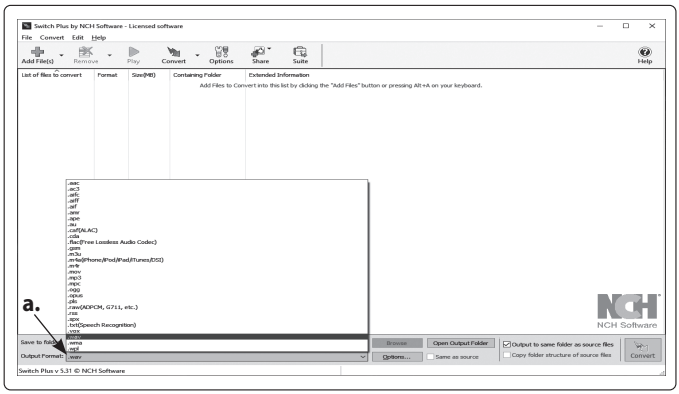
Procedure

1. Record your 'Pull forward' message using a preferred audio/voice recorder, then rename the recorded files to the required name in a known location of your computer.

2. Audio files need to be saved in mono (single track) and be encoded as: ***U-Law at 16 Khz***. We suggest using ***NCH Switch Plus*** (http://www.nch.com.au/switch) to convert your audio messages to the correct format. It's affordable for commercial use, and simple to use.

3. Open the NCH Switch program to the main screen, and then follow the steps outlined below:

a. Select 'Output Format' in the bottom left of the window, choose '.wav'

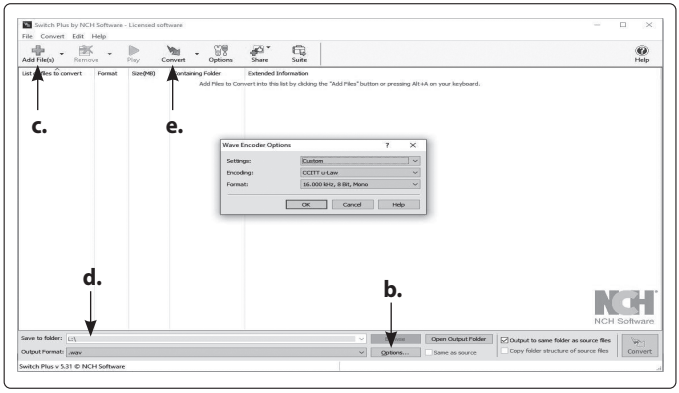


b. Select 'Options' and choose custom settings: CCITT u-Law, 16,000 KHz, 8 Bit, Mono

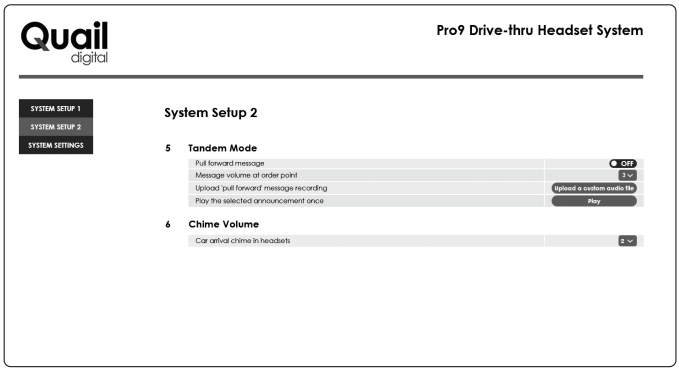
c. Click 'Add File(s)' - using the browser, select all the message files (in any format) to be converted to the correct type

d. Select 'Browse' and choose a preferred output location

e. Click 'Convert' - the converted files will automatically appear in the folder chosen in '**c.**'



4. Once connected to the Quail Pro9 base (see **Appendix H**) use the link in 'System Setup 2', Section 5, 'Tandem Mode' to upload your file to the base.



5. Using the link 'Play', check that your message is operating. You will hear the message coming from speaker post 2 when the link is activated.

Please note, messages must be recorded in this format and be under six seconds in length. This message is the operational 'Pull forward' message for a tandem operation drive-thru lane and is not intended as a greet message.

Trouble shooting

BASE LED STATUS

RED single flash	**RED** double flash	**RED** triple flash	**AMBER** triple flash	**AMBER** solid
Failure between base and DTM	Road loop has failed	Speaker in order point failed	Microphone in order point failed	Base software lockup
Check cable is in correct port on top of base	Contact Tech to repair or replace loop	Contact Tech to replace speaker in order point	Contact Tech to replace mic in order point	Follow base reset procedure
	Press vehicle detection override on bottom of base to keep microphone live until repair is completed			Press and hold reset button on bottom of base. Base LED will flash then change to solid **AMBER** after approx 10 secs. Release button and base will reset.

Note: The above troubleshooting must be completed with a system reset. After any system component changes, the system must be reset.

REPEATER LED STATUS

No LED

No power to repeater

Check Cat5 cable is in correct base and repeater sockets:

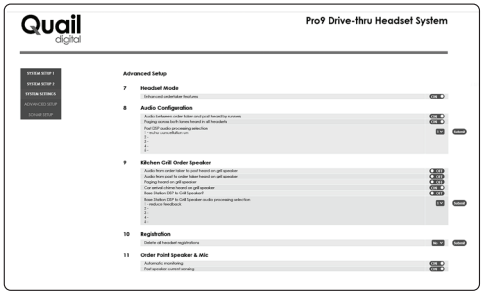
base socket repeater socket

Engineer visit required to check wiring andconnectors, replace repeater if cable tests OK.

Engineer instruction: establish power failure. Check Cat5 cable is in correct base and repeater sockets, perform cable test and only replace repeater if test confirms cables are OK.

Trouble shooting

HEADSET LED STATUS				
Fast flashing **RED** ***and*** fast continuous beeping	Single flash **RED** ***and*** single beep every second	Single or double flash **GREEN** ***and*** 3 fast beeps every 3 seconds		Flash ANY colour with additional **RED** single flash in-between
		OR		
Hardware fault in headset	Headset not registered	Headset is out of range	Headset from another store	Battery low
Arrange headset swap out	Register headset to base	Move closer to base	Re-register headset to this store as below	Return battery to charger
	Hold headset to base as shown below. Headset boom LED will fast-flash **GREEN** whilst registering, then pulse **GREEN** when completed. 	Headset will return to normal operation	Remove battery from headset, hold headset up to base and THEN re-insert battery. Headset LED will fast flash **GREEN** then return to normal **GREEN** pulse ready for use.	Take charged battery from charger, insert into headset, LED will return to operational status. Resume operation



Note: If you are an installer, service agent or service centre, it is good practice to deregister a headset BEFORE sending it to a customer. Customers should always receive an unregistered headset which will flash RED and require registration as in column 2 above, before use in store.

Procedure to deregister a headset before giving it to the customer: Go to Appendix F & H in this manual. Connect a computer to the base. On GUI page 'System Setup 2', go to 'Registration', select YES, then click 'Submit'. ALL headsets registered to that base will deregister, the headset LED will flash RED with a single beep every second.

Manufacturer's notes

Battery handling and safety guidance for Quail Digital headset batteries

Quail Digital uses Lithium Polymer (LiPo) type rechargeable batteries. On these systems the battery is removed from the headset device to recharge it. When placed in the charger the battery will 'fast-charge' to 80% capacity for up to two hours and then drop back to a trickle charge for the remaining 20% of the charge cycle. Once the battery is fully charged the charger will maintain a minimal charge routine until the battery is removed from the charger. LiPo rechargeable batteries deteriorate in performance and composition over time, reducing the full charge capacity and integrity of the battery.

LiPo batteries must be swapped out and disposed of in an approved manner every two years.

Battery safety guidance

• Routinely inspect the batteries to ensure there are no signs of damage, deformity, or swelling, before use and when returning to the charger. If the battery is deformed or the casing is cracked or otherwise damaged, isolate it, and dispose of in an approved manner.

• Batteries should always be either in the charger OR in a headset. Do not leave batteries out on worktops or other places where they could become physically damaged or exposed to excessive heat or liquids of any type.

Battery replacement schedule

• Batteries are a consumable item and must be replaced every two years to maintain the performance and safety of the headset system.

• 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 please contact: 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-P9HS

FCC ID: UDDQP9HS 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-QP9HS 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 économiqueCanada 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'encompromettre le fonctionnement.

This equipment complies with IC radiation exposure limits set forth for an uncontrolled environment.

Cet équipement est conforme aux limites d'expositionde radiation IC énoncés pour un environnement non contrôlé.

Base - HVIN: Q-P9BS

In order to comply with FCC and IC RF Exposure requirements, the base 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.

FCC ID: UDDQP9BS 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 radiofrequency 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.

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This equipment complies with IC radiation exposure limits set forth for an uncontrolled environment.

Cet équipement est conforme aux limites d'exposition deradiation IC énoncés pour un environnement non contrôlé.

Pro9 system components

Pro9 Headset - Q-P9HS

Operating frequency
1.88-1.90GHz EMEA, Asia
1.91-1.93GHz North America

Power
250mw EMEA, Asia
125mw North America

Pro9 Charger - Q-P9CH

5v 4 amp power input
8 port
Power light
Individual battery status lights
205x325x45mm
710g

Pro9 Base Station - Q-P9BS

Operating frequency
1.88-1.90GHz EMEA, Asia
1.91-1.93GHz North America

Power
250mw EMEA, Asia
125mw North America

Pro9 Charger PSU Q-P9PSU5

100-240v AC voltage sensing
5v DC 4 amp output
4 x region IEC mains lead supplied

Pro9 Base PSU Q-P9BS PSU

100-240v AC voltage sensing
48v DC 1.25 amp output

Pro9 Drive-thru Module Q-P9DTM

Process and digitizes clean audio from speaker and microphone to and from order taker.
Vehicle loop detector (inc) or sonar
252x170x55mm without connectors - 880g

Pro9 Speaker & enclosure Q-P9SPK

Mylar waterproof cone, enclosure
IP64 15watts /30 peak, 8 ohms
210 to 7000 Hz
4 pin GX16 connector
117x117x73mm without bracket
682g

Pro9 Microphone & enclosure Q-P9MIC

Mylar waterproof cone, enclosure
IP64, 50 ohms
210 to 7000 Hz
3 pin GX16 connector
117x117x73mm without bracket
682g

Scan to view
Installation Video

sales@quaildigital.com
www.quaildigital.com

Quail digital

20 Nov 2025