Pro9

Headset System
Installation Manual

Quail
digital

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.

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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 27 of this manual lists the components parts of the system. 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 on this product before you start the installation, and to follow the installation steps in the order presented in this guide.

Quail Digital uses direct burial Cat5 cable for the link between the order post and the base station and always recommends that solution. 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 (Q-P9NTB)

## 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 cable
- RJ45 connectors (up to 4)
- Multimeter
- Stepladder
- Laptop or phone for setup

Installation procedure

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.

Figure 1 - Pro9 charger

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 the diagram. If it doesn't, consider drilling more holes to maximise the effectiveness of microphone.
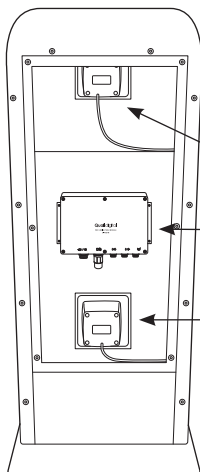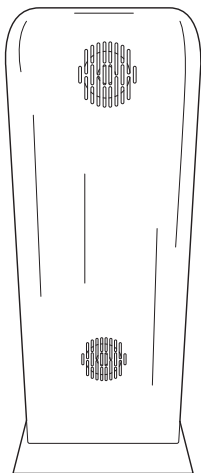
Step 4 Place the acoustic foam provided around the microphone to provide extra acoustic protection.

Step 5 Use the same procedure as in Step 3 above to mount the speaker against the lower grill; it does not require the acoustic foam.

Microphone

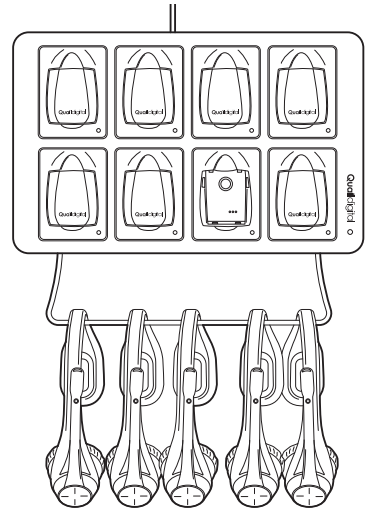**Drive-Thru Module**

Speaker

Figure 2 - Order point assembly

Step 6 You now 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.
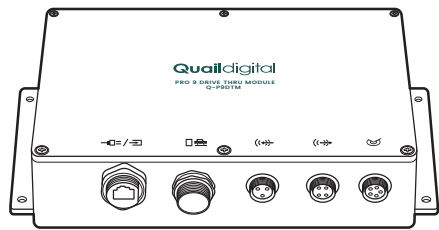

Figure 3 - Pro9 Drive-Thru Module

Step 7 Next install a single length of direct burial Cat5 cable from the DTM in the order point, through the existing underground conduit(s) to the likely location of the base station (Q-P9BS) in the kitchen area. Then, using your crimping tool, terminate both ends of the cable with RJ45 plugs, remembering to fit waterproof connection cover provided onto the Cat5 at the DTM end. Use your Cat5 tester to confirm a PASS for a full 8 core test. Figure 4 shows the colour code sequence for wiring the plug.

brown
brown/white
green
blue/white
blue
green/white
orange
orange/white
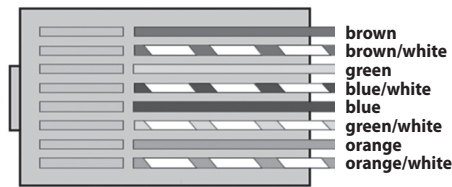
Figure 4 - Type B RJ45 termination colour code

Step 8 Plug in the 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, remembering to fit the weatherproof cover provided.

Now go straight to Step 11.

Connection to mic   Connection to speaker   Connection to sonar

Figure 5 - Loop connection

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 B for this procedure.

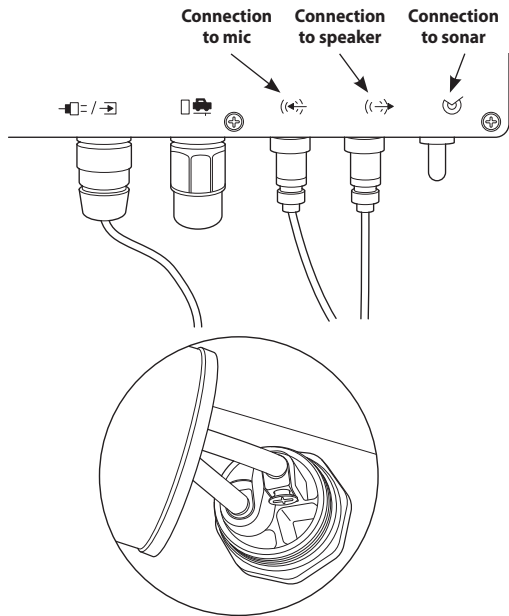**Step 11** Choose a location to mount the base station with as much clear space around it to optimize the transmission range. Use the template to locate the fixing holes. The power supply should be close by.
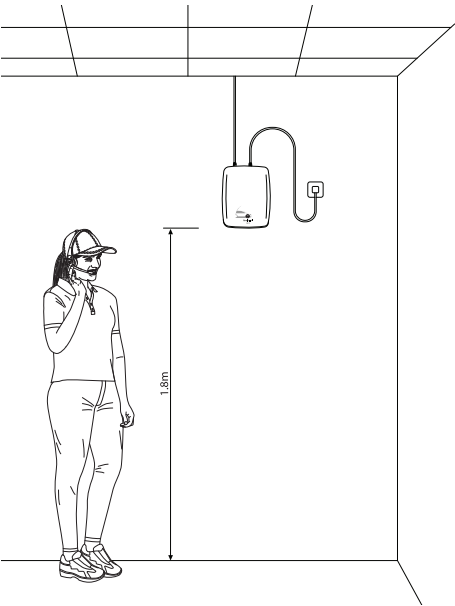
Figure 6 - Positioning the base station

Step 12 If there is a lane timer and/or a chime speaker to be connected to the system, the cables for both need to be fed into an Auxiliary Connection Box (Q-P9ACB) which connects into the base station. When completed, plug in the DIN plug into the base station and use the length of cable to mount the auxiliary connection box out of sight in the ceiling or under a counter.

1 Chime Speaker +ve
2 Chime Speaker -ve
3 Timer out Common
4 Timer out NO
5 Timer greet +ve
6 Timer greet -ve
7 Ext. Activation Common
8 Ext. Activation Detect

2m Cable to Auxiliary Plug

Figure 7 - Connecting lane timer/chime speaker to the system

Pin	Colour	Connection
1	White	Chime Speaker +ve
2	Red	Chime Speaker -ve
3	Blue	Timer out Common
4	Green	Timer out NO
5	Brown	Timer greet +ve
6	Grey	Timer greet -ve
7	Purple	Ext. Activation Common
8	Yellow	Ext. Activation Detect

Power   Connection to table service if used   Connection to repeater if used   Cat5 cable from DTM   Connection to timer & grill speaker
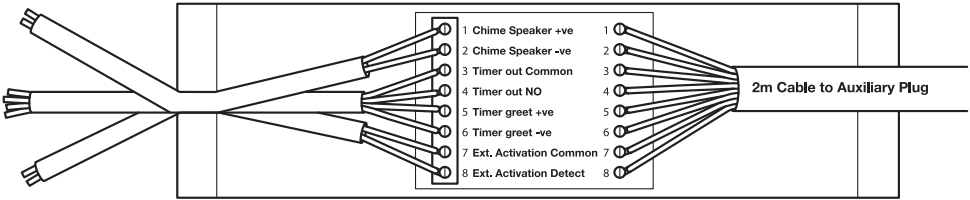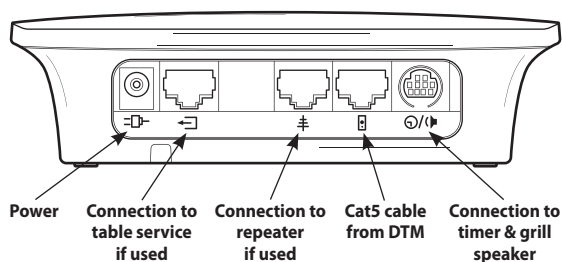
Figure 8 - Connecting to base station (top)

Step 13 Plug in the Cat5 cable from the DTM into the base station. On powering up the base station, 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 22.

Step 14 Now register the headsets to the base station. Take the charged batteries and insert one into each headset. The headsets will pulse white initially then red when not registered. Hold the headset to the base station as shown. The LED on the end of the boom will fast-flash green during the registration process, then double pulse green when registered. Repeat this process one at a time until each headset is registered.
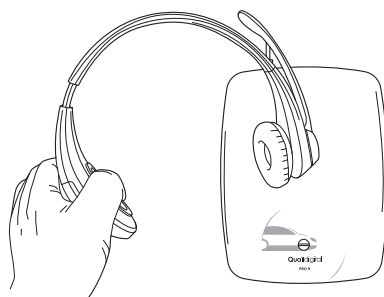
Figure 9 - Registering the headset

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 station. The speaker in the order point is live. Press 'I' 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.

PRO 9 BASE STATION | Q-P9BS

Vehicle detection override
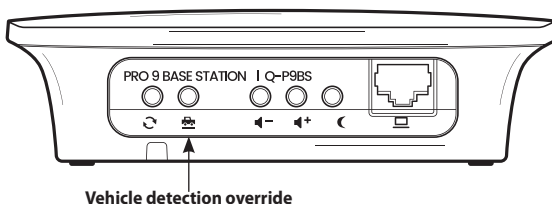
Figure 10 - Testing the audio link
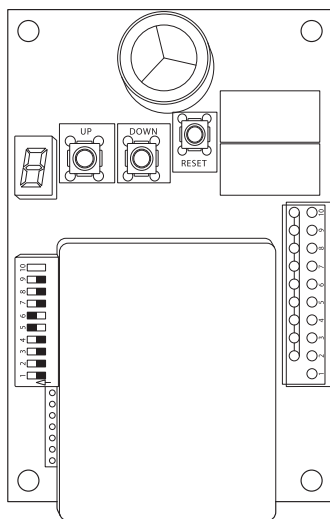
Figure 11 - Vehicle detector board, inside DTM

Step 16 Set the road loop sensitivity so the arrival of every vehicle is picked up accurately by the DTM.

a. Remove the lid from the DTM and then park an average sized car (not SUV or van) on the road loop at the order point.

b. Identify the detector PCB in the DTM and then use the 'Up' and 'Down' buttons to adjust the displayed number to 5 from whatever it shows now.

c. Drive the vehicle off the loop and check the loop reading returns to '0' and when the vehicle returns back onto the loop make sure the number displayed is 5, then replace the lid.

**Step 17** Now set 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. To do this you need to access the Pro9 settings menu as below which you do via your laptop or cellphone (see Appendix F and G for access).

Step 18 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 'I', to talk, the headset will go into to handsfree 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 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.
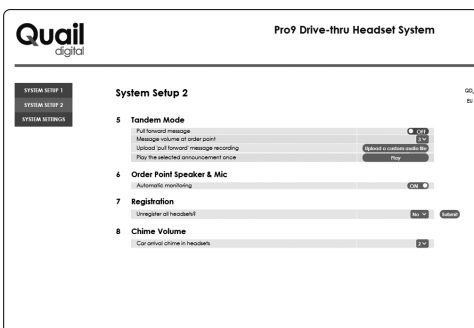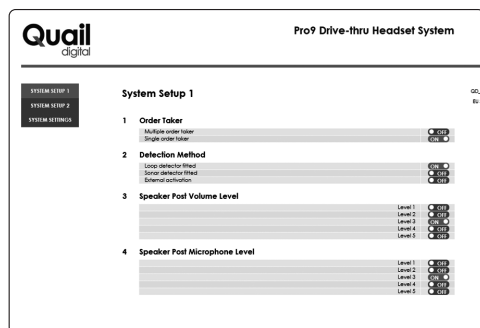
Step 19 While in the settings menu, ask the customer whether they wish to operate with a SINGLE order taker mode, or MULTIPLE order taker mode. The default is multiple order taker.

Step 20 Now explain the headset features to the customer:

In 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 'I' button puts the order taker into handsfree 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.

In single order taker mode: there is one dedicated order taker at any one time. Only that headset can communicate with the order point until they are overridden by another user. The order taker's boom LED double pulses green, runner's single pulses green. All users hear the car arrival chime and hear the conversation between customer and order taker. They can speak to the order taker during the order process by pressing '✳' and can speak with each other by doing the same. Any runner can take over as order taker by pressing and holding 'I' and '–' until their boom LED double pulses green. When a vehicle arrives they should press 'I'. They're now the order taker and the previous order taker becomes a runner (single pulse green). When a vehicle is detected the red LED on the base splits showing green on the bottom half.
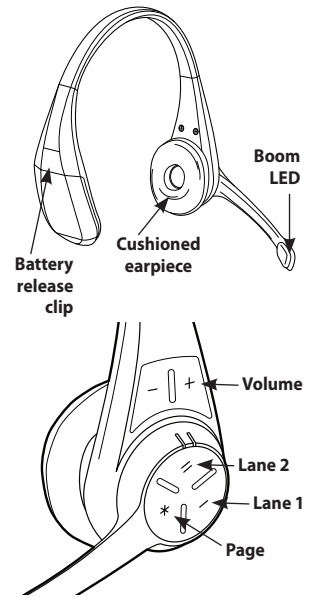
Figure 12 - Pro9 headset

Step 21 Now show the customer the features on the underside of the base station.

a. If the site needs to reduce the order point noise 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 approx 20%. The green light adjacent to the button indicates night volume is active.

b. If using a chime speaker the volume '+' and '-' buttons give manual adjustment to the sound level.

c. The vehicle detector is the manual override if the automatic vehicle detection fails.
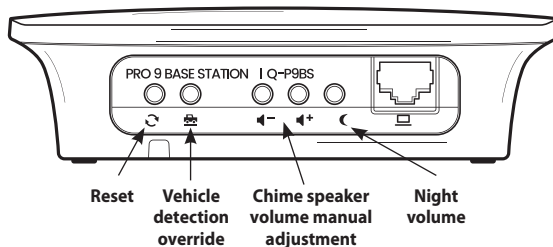
Figure 13 - Base station (underside)

d. 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.

Appendix A

Installing Pro9 system using existing cabling to connect the base station to the DTM located in the order point (Q-P9NTB x2)

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 below to make the correct connections.

1. Make and test 2 Cat5 patch leads at a length suitable for use, one inside and one outside. (You may use bought Cat5 patch leads if preferred.) Fully test these leads.

2. Outside, strip back your existing cable and connect into the screw terminals of one of the network termination boxes. Follow the colour codes in the table below.

**3.** Inside, again strip back the other end of your existing cables and connect into the second network termination box. Follow the colour codes in the table below.

4. At the order point connect your Cat5 lead from the DTM into the network termination box.

5. Outside, connect the second Cat5 lead from the network termination box to the base station.
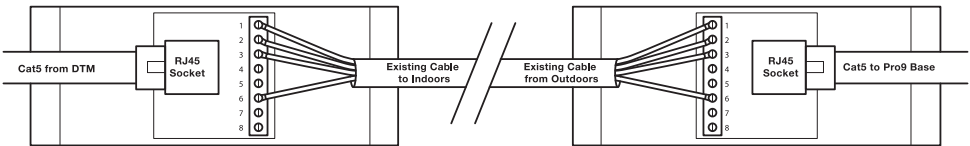
Figure 14 - Connecting using existing cabling to DTM in speaker post

Different types of existing cables should be connected as follows.

Cable type	Terminal connection								Notes
	1	2	3	4	5	6	7	8	
4 core overall screened 22A WG with drain	red	black	white	nc	nc	green	nc	nc	As used in many DT installations
Specialist DT cable 3 pair individually screened	red	black	white	nc	nc	blue	nc	nc	Specialised cable designed for DT
Multi pair screened cable 22A WG (use two pairs)	red (pr1)	black (pr1)	white (pr2)	nc	nc	black (pr2)	nc	nc	General purpose cable suitable for DT

Appendix B

Installing Pro9 system using existing cabling to connect the base station 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. First, cut the cables on both the speaker and the microphone. Both have fixed cables, factory terminated with specialist connectors.

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

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

4. Connect your existing audio cable to section B of the PCB as shown.

5. 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.
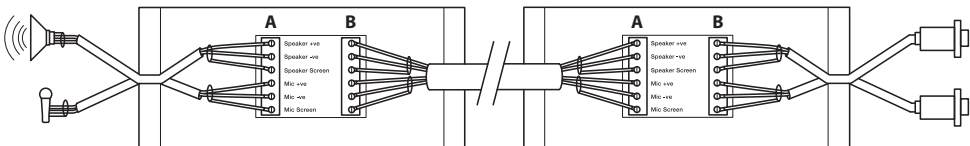
Figure 15 - Connecting using existing cabling to DTM in building

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

	Terminal connection Connector B						
Installed cable type	**Spkr +ve**	**Spkr -ve**	**Spkr scrn**	**Mic +ve**	**Mic -ve**	**Mic scrn**	**Notes**
4 core overall screened 22A WG with drain	red	black	nc	white	green	scm (drain)	**As used in many DT installations**
Specialist DT cable 3 pair individually screened	red	black	nc	white	blue	scm	**Specialised cable designed for DT**
Multi pair screened cable 22A WG (use two pairs)	red (pr1)	black (pr1)	scm (pr2)	white (pr2)	black (pr2)	scm (pr2)	**General purpose cable suitable for DT**

Appendix C

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:

1 Chime Speaker +ve   1
2 Chime Speaker -ve   2
3 Timer out Common   3
4 Timer out NO   4
5 Timer greet +ve   5
6 Timer greet -ve   6
7 Ext. Activation Common   7
8 Ext. Activation Detect   8

2m Cable to Auxiliary Plug
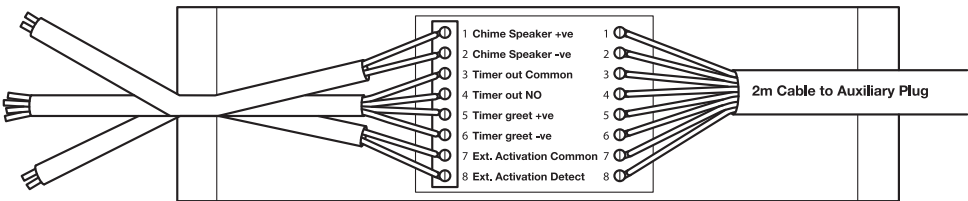
Figure16 - Auxillary connector box connections

Plug this interface connection unit into the corresponding connector on top of the base station.
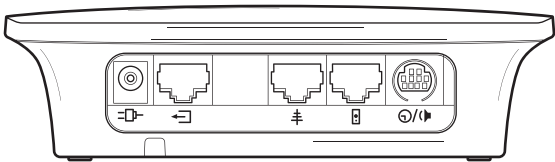
Figure17 - base station (top)

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 D

Pro9 repeaters (Q-P9REP)

If the range needs to be increased you can add up to two Repeaters which, subject to local conditions, doubles your headset range.

A repeater is another radio device and is wall mounted like the base station. Its power is fed down the Cat5 cable which connects the repeater to the base station.

Two repeaters can be connected in a daisy chain format to a base station (as shown below).
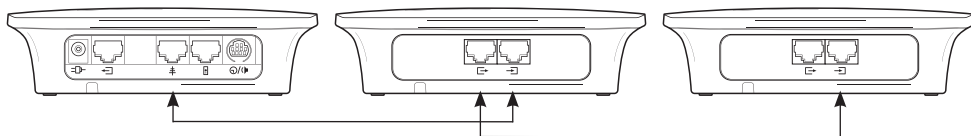
Figure 18 - Increasing range using up to two Pro9 repeaters

1. Putting on a headset walk from the base station 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 station to the repeater. Connect up.

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 22).

Appendix E

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 Station. The table service base connects to the drive-thru base station using a Cat5 cable and uses its own 48v power supply.

The table service base station is located in the seating area of the restaurant because that is where the coverage is required. Usually, pick a location for the base somewhere between the service counter and the entrance. If there are multiple floors adjust your placement accordingly and consider adding one or more repeaters.

Figure 19 - Table service base station

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

2. Mount the table service base station 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 station.

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

5. Plug in the new Cat5 cable to the 'OUT' socket located on the top of the drive-thru base station.
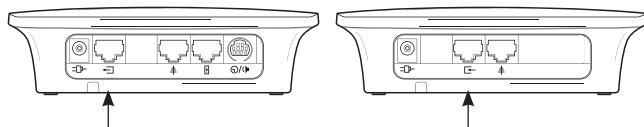
Figure 20 - Connect table service base station to drive-thru base station

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

7. After successful start up the LED on the TS base station will be solid amber.

8. Press the '−' 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 page '✳' 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 'I' and '−'. The boom LED will change from pulsing amber to pulsing green.

Appendix F

Connecting a computer to Pro9 base station

To make adjustments to the Pro9 system you can connect a laptop directly into the comms port on the bottom of the Pro9 base station. 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 station 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 G

Connecting a computer to Pro9 base station 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.
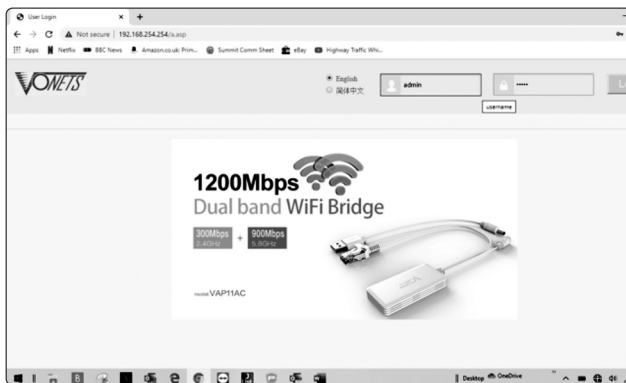
5. On the next menu, select 'LAN settings' then 'Static IP'
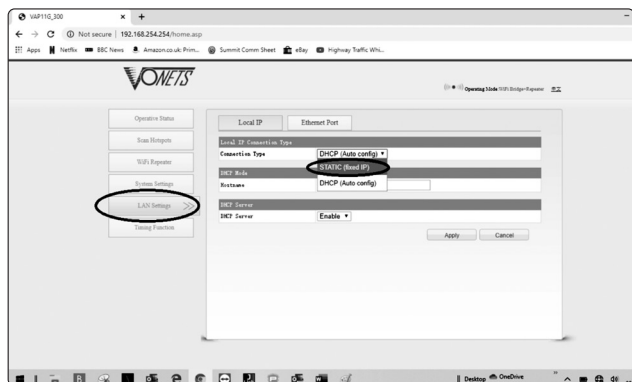
6. In the IP address box, change the address to '192.168.1.10' and click 'Apply'
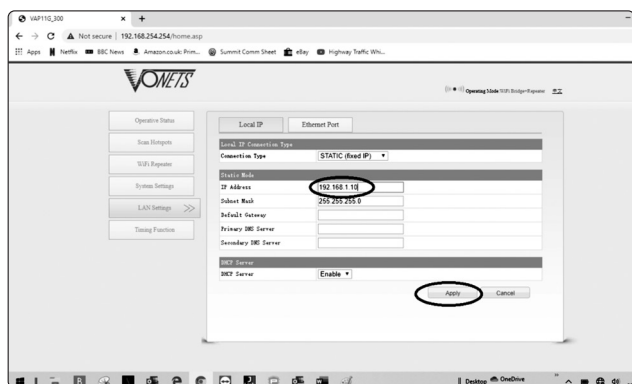
7. The device will now say 'Please wait'; once this is finished (approx 10 seconds), unplug the USB from your laptop.

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 H

Setting up Pro9 as dual lane/tandem configuration (Q-P9BSDL)

You will require two Q-P9BSDL base stations to operate two order points.

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.

Note that each base station uses its own power. And note that if range extension is required a REPEATER is required to be connected to each base station.

1. Disconnect the power from both base stations.

2. Identify which base station is connected to the first order point and connect a short Cat5 cable from the 'OUT' port of this base station to the 'IN' port of the second base station.
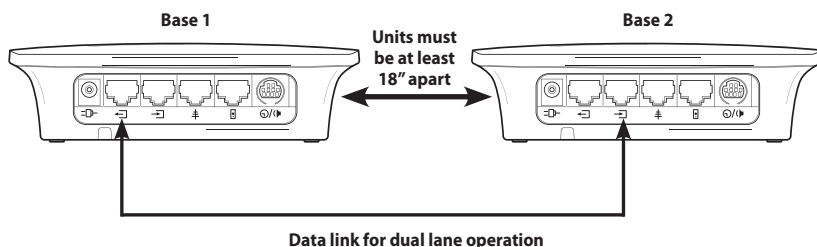
Figure 21 - Connecting dual lane stations

3. Re-connect the power to BOTH base stations. The LED on the front of the lane 1 base station will turn solid red. The LED on the lane 2 base station will turn solid GREEN.

4. Now follow Step 14 to register ALL the headsets to the system using either base; the process is identical to that for single lane.

5. Now follow Steps 15 to 19 in the manual to set up the audio levels at each order point. The setup process is done twice, separately, once for each lane. Note than in dual/tandem lane configuration, there is no 'multi-order taker' feature.
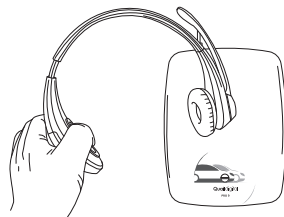
You will be asked to confirm whether the site is operating DUAL or TANDEM lane. If you have selected tandem, you will be required to record a 'Pull forward' message. Please go to Appendix I to read how to do that.

6. 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.
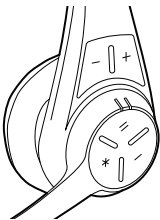
When you place a battery into a headset at the beginning of the day it always defaults to lane 1 runner. Review the table below to understand how to move from lane 1 runner mode.

Figure 22 shows the bottom of the base station. When pressed, the third button from the left engages 'Single Order Taker' mode, where a single order taker operates both lanes. Its default position (off) is one order taker for each order point.
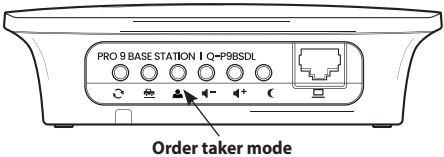
Order taker mode

Figure 22 - Additional data socket & function button

Single order taker mode	Action	Standby	Car arrival order point 1	Car arrival order point 2
All headsets	Insert battery. All headsets become order takers	Boom LED double pulse green	Headset single beeps, press 'I' to open channel. LED changes to solid green	Headset double beeps, press 'II' to open channel. LED changes to solid blue
Dual order taker mode				
Headset 1	Insert battery	Boom LED double pulse green	Headset single beeps, press 'I' to open channel. LED changes to solid green	No action
Headset 2	Press 'II' and '−' for 2 seconds. LED changes to double pulse blue	Boom LED double pulse blue	No action	Headset double beeps, press 'II' to open channel. LED changes to solid blue

Appendix I

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 station for Lane 2. It is good practice to record the same message to both base stations 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'
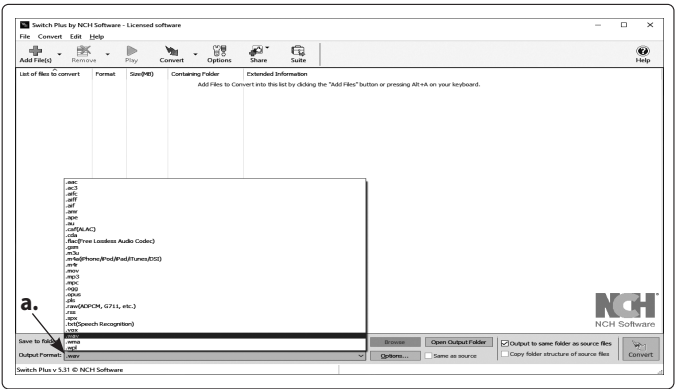
b. Select 'Options' and choose custom settings: CCITT u-Law, 16,000 KHz, 8 Bit, Mono

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.**'
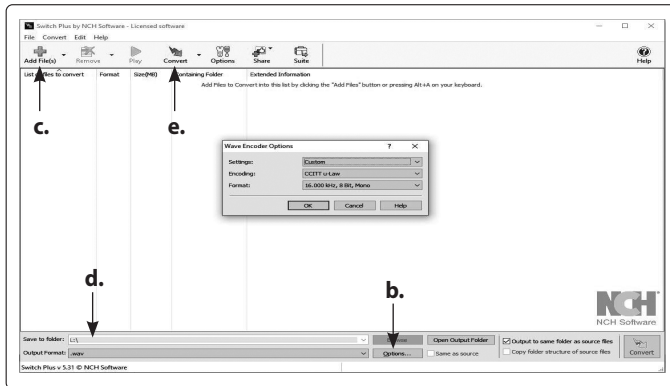
4. Once connected to the Quail Pro9 base station (see Appendix F) use the link in 'System Setup 2', Section 5, 'Tandem Mode' to upload your file to the base station.
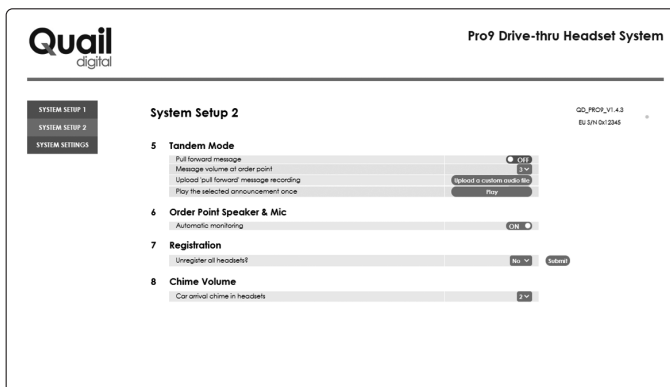
5. Using the link 'Play', check that your message is operating. You will hear the message coming from speaker post 2 when the link is activated.

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

DRIVE-THRU BASE STATION LED

RED single flash	RED double flash	RED triple flash	AMBER triple flash
Failure between base station and DTM	Road loop has failed	Speaker in order point has failed	Microphone in order point has failed
First check cable is plugged in on top of base station; if it is…	Send Tech to site to repair or replace loop	Send Tech to site to replace speaker in order point	Send Tech to site to replace microphone in order point
Ask customer to locate the DTM. If LED on the bottom is 'OFF', the cable between base and order point is faulty; send Tech to check/replace cable or connectors. If LED on the DTM is RED, the DTM has failed. Send Tech with replacement DTM	Customer could press/ engage vehicle detection override on underside of base station to keep speaker and microphone permanently live until repair complete		

REPEATER LED

No LED	AMBER
No power to base	Insufficient power getting to repeater
Check plugged in correctly; if it is…	Send Tech to site to check wiring and connectors, take replacement repeater if cable tests OK
Send Tech to site to check wiring and connectors, take replacement repeater if cable tests OK	Replace repeater if cable tests OK

HEADSET LED

Fast flashing RED **and** fast continuous beeping	Single flash RED **and** single beep every second	Single flash GREEN **and** 3 fast beeps every 3 seconds	Any headset status with an additional RED single flash in-between
Hardware fault in headset	Headset not registered	Headset is 'Out of range'	Battery low
Arrange headset swap out	Register headset to base station	Move closer to base station	Return battery to charger
	Headset will single pulse or double pulse GREEN when registered	Headset beeps stop, LED returns to operational status **OR**	Take charged battery from charger, insert into headset, LED will return to operational status. Resume operation
		Headset continues 'Out of range' status when close to base station Headset not registered to base station on premises, requires registration to system	
	See Step 14 of main manual for registration process	Remove battery from headset, hold headset up to base station. Insert battery again. LED will fast-flash RED, then pulse GREEN and will be ready for use	

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 and G in this manual. Connect a computer to the base station. On GUI page 'System Setup 2', go to 'Registration', select YES, then click 'Submit'. ALL headsets registered to that base station 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.

• 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 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.

Headset transition table

Original headset role	off unregistered		off registered, single order		off registered, multiple order	
Boom LED						
User action	insert battery		insert battery		insert battery	
New headset role	power on, unregistered		lane 1 runner		lane 1 order taker	
Boom LED	flashing red		single pulse green		double pulse green	
Sound						

Original headset role	lane 1 runner					
Boom LED	single pulse green					
User action	press '1'	press '2'	press '*'	press 'vol-' and '1'	press 'vol-' and '2'	press 'vol-' and '*'
New headset role	no change	no change	lane 1 page	lane 1 order taker	lane 2 runner	table service
Boom LED			solid white	double pulse green	single pulse blue	single pulse yellow
Sound			single beep	double beep	single beep	triple beep

Original headset role	lane 2 runner					
Boom LED	single pulse blue					
User action	press '1'	press '2'	press '*'	press 'vol-' and '1'	press 'vol-' and '2'	press 'vol-' and '*'
New headset role	no change	no change	lane 2 page	lane 1 runner	lane 2 order taker	table service
Boom LED			solid white	single pulse green	double pulse blue	single pulse yellow
Sound			single beep	single beep	double beep	triple beep

Original headset role	table service					
Boom LED	single pulse white					
User action	press '1'	press '2'	press '*'	press 'vol-' and '1'	press 'vol-' and '2'	press 'vol-' and '*'
New headset role	no change	no change	table service page	lane 1 runner	lane 2 runner	no change
Boom LED			solid white	single pulse green	single pulse blue	
Sound			single beep	single beep	single beep	triple beep

Original headset role	lane 1 order taker					
Boom LED	double pulse green					
User action	press '1' (car)	press '2' (car)	press '*'	press 'vol-' and '1'	press 'vol-' and '2'	press 'vol-' and '*'
New headset role	speak to lane 1 post	speak to lane 2 post (cross)	lane 1 page	lane 1 runner	lane 2 runner	table service
Boom LED	solid green	solid blue	solid white	single pulse green	single pulse blue	single pulse yellow
Sound	single beep		single beep	single beep	single beep	triple beep

Original headset role	lane 2 order taker					
Boom LED	double pulse blue					
User action	press '1' (car)	press '2' (car)	press '*'	press 'vol-' and '1'	press 'vol-' and '2'	press 'vol-' and '*'
New headset role	no change	speak to lane 2 post	lane 1 page	lane 1 runner	lane 2 runner	table service
Boom LED		solid blue	solid white	single pulse green	single pulse blue	single pulse yellow
Sound		single beep	double beep	single beep	single beep	triple beep

Car arrival sounds	car arrives lane 1 (cross)	car arrives lane 2 (cross)	car arrives lane 1 (split)	car arrives lane 2 (split)
Lane 1 runner	single beep	double beep	single beep	no sound
Lane 2 runner	single beep	double beep	no sound	double beep
Table service	no sound	no sound	no sound	no sound
Lane 2 order taker	single beep	double beep	single beep	no sound
Lane 2 order taker	not used	not used	no sound	double beep

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 Station

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.

HVIN: Q-P9BS

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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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

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-PSU12

100-240v AC voltage sensing
12v DC 5 amp output
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

12 Oct 2020