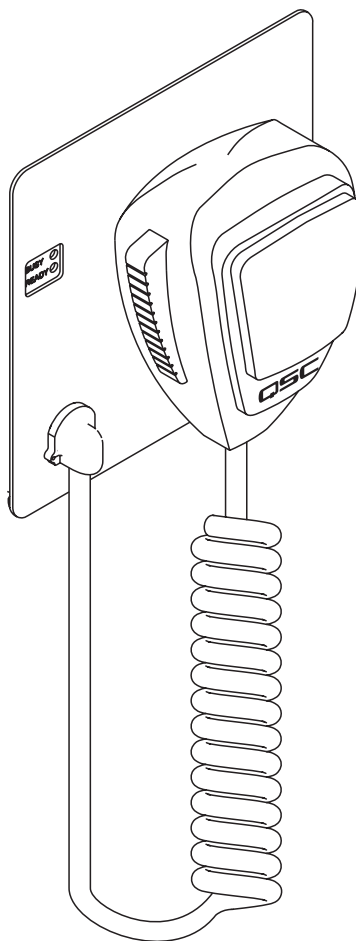


**PS-X** – Page Station Expander



TD-000356-00-A



## EXPLANATION OF TERMS AND SYMBOLS

The term "**WARNING!**" indicates instructions regarding personal safety. If the instructions are not followed the result may be bodily injury or death.

The term "**CAUTION!**" indicates instructions regarding possible damage to physical equipment. If these instructions are not followed, it may result in damage to the equipment that may not be covered under the warranty.

The term "**IMPORTANT!**" indicates instructions or information that are vital to the successful completion of the procedure.

The term "**NOTE**" is used to indicate additional useful information.



The intent of the lightning flash with arrowhead symbol in a triangle is to alert the user to the presence of un-insulated "dangerous" voltage within the product's enclosure that may be of sufficient magnitude to constitute a risk of electric shock to humans.



The intent of the exclamation point within an equilateral triangle is to alert the user to the presence of important safety, and operating and maintenance instructions in this manual.



### IMPORTANT SAFETY INSTRUCTIONS



**WARNING!:** TO PREVENT FIRE OR ELECTRIC SHOCK, DO NOT EXPOSE THIS EQUIPMENT TO RAIN OR MOISTURE.  
– Maximum operating ambient temperature is 50°C (122°F).

- Read these instructions.
- Keep these instructions.
- Heed all warnings.
- Follow all instructions.
- Do not use this apparatus near water.
- Clean only with a dry cloth.
- Do not block any ventilation opening. Install in accordance with the manufacturer's instructions.
- Do not install near any heat sources such as radiators, heat registers, stoves, or other apparatus (including amplifiers) that produce heat.
- Only use attachments/accessories specified by the manufacturer.
- Unplug this apparatus during lightning storms or when unused for long periods of time.
- Refer all servicing to qualified service personnel. Servicing is required when the apparatus has been damaged in any way, such as power-supply cord or plug is damaged, liquid has been spilled or objects have fallen into the apparatus, the apparatus has been exposed to rain or moisture, does not operate normally, or has been dropped.
- Adhere to all applicable, local codes.
- Consult a licensed, professional engineer when any doubt or questions arise regarding a physical equipment installation.

Designed and Assembled in the USA

## FCC Statement



**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.

## Warranty (USA only; other countries, see your dealer or distributor)

### QSC Audio Products 3 Year Limited Warranty

QSC Audio Products, LLC ("QSC") guarantees its products to be free from defective material and/or workmanship and will replace defective parts and repair malfunctioning products under this warranty when the defect occurs under normal installation and use, provided the unit is returned to our factory, one of our authorized service stations or an authorized QSC International Distributor via pre-paid transportation with a copy of proof of purchase (i.e., sales receipt). This warranty provides that the examination of the return product must indicate, in our judgment, a manufacturing defect. This warranty does not extend to any product which has been subjected to misuse, neglect, accident, improper installation, or where the date code has been removed or defaced. QSC shall not be liable for incidental and/or consequential damages. This warranty gives you specific legal rights. This limited warranty is freely transferable during the term of the warranty period. The warranty on QSC products is NOT VALID if the products have been purchased from an unauthorized dealer/online e-tailer, or if the original factory serial number has been removed, defaced, or replaced in any way. Damage to, or loss of any software or data residing on the product is not covered. When providing repair or replacement service, QSC will use reasonable efforts to reinstall the product's original software configuration and subsequent update releases, but will not provide any recovery or transfer of software or data contained on the serviced unit not originally included in the product.

Customers may have additional rights, which vary from state to state or from country to country. In the event that a provision of this limited warranty is void, prohibited or superseded by local laws, the remaining provisions shall remain in effect.

**The QSC limited warranty is valid for a period of three (3) years from date of purchase in the United States and many (but not all) other countries.**

For QSC warranty information in countries other than the United States, contact your authorized QSC international distributor. A list of QSC International distributors is available at [www.qscaudio.com](http://www.qscaudio.com).

To register your QSC product online, go to [www.qscaudio.com](http://www.qscaudio.com) and select "Product Registration". Other questions regarding this warranty can be answered by calling, e-mailing or contacting your authorized QSC distributor.

**Phone:** 1-800-854-4079 within US and Canada, +1-714-754-6175 international, **Email:** [warranty@qscaudio.com](mailto:warranty@qscaudio.com), **Website:** [www.qscaudio.com](http://www.qscaudio.com).

## RoHS STATEMENT

The Q-Sys PS-X products are in compliance with European Directive 2002/95/EC – Restriction of Hazardous Substances (RoHS).

The Q-Sys PS-X products are in compliance with “China RoHS” directives. The following chart is provided for product use in China and its territories:

|                               | Q-Sys PS-X  |           |           |                 |               |                 |
|-------------------------------|---|-----------|-----------|-----------------|---------------|-----------------|
| 部件名称<br>(Part Name)           | 有毒有害物质或元素<br>(Toxic or hazardous Substances and Elements) |           |           |                 |               |                 |
|                               | 铅<br>(Pb)   | 汞<br>(Hg) | 镉<br>(Cd) | 六价铬<br>(Cr(vi)) | 多溴联苯<br>(PBB) | 多溴二苯醚<br>(PBDE) |
| 电路板组件<br>(PCB Assemblies)     | X   | O         | O         | O               | O             | O               |
| 机壳装配件<br>(Chassis Assemblies) | X   | O         | O         | O               | O             | O               |

O: 表明这些有毒或有害物质在部件使用的同类材料中的含量是在 SJ/T11363\_2006 极限的要求之下。  
(O: Indicates that this toxic or hazardous substance contained in all of the homogeneous materials for this part is below the limit requirement in SJ/T11363\_2006.)

X: 表明这些有毒或有害物质在部件使用的同类材料中至少有一种含量是在 SJ/T11363\_2006 极限的要求之上。  
(X: Indicates that this toxic or hazardous substance contained in at least one of the homogeneous materials used for this part is above the limit requirement in SJ/T11363\_2006.)

# Introduction

The Page Station Expander is designed to be mounted on a wall housed in a standard, US 2-gang, electrical wall box and connects directly to the rear of a Q-Sys Page Station via Cat 5e cable. Voice input is provided through a handheld dynamic push-to-talk microphone. A unique magnetic docking system and cable strain relief allow flexibility in microphone placement when not in use, yet help deter theft or removal of the microphone. Combining the Page Station Expander and the Page Station provide multiple inputs for a common zone, for example both the kiosk and jet-way of an airport gate can easily be served by this combination.

For detailed information about the Q-Sys Page Stations, and the Q-LAN Network, refer to the Page Station User Guide, and the Q-Sys Designer online help.

## Page Station Expander Features

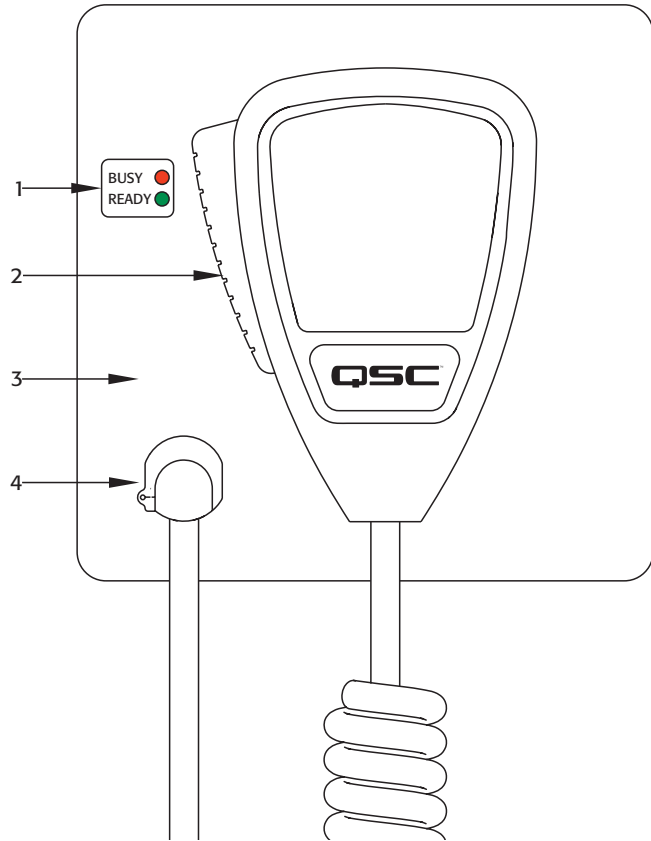


Figure 1

- 1. Busy and Ready LED indicators
- 2. Push-to-talk button
- 3. Magnetic Surface
- 4. Locking Strain Relief

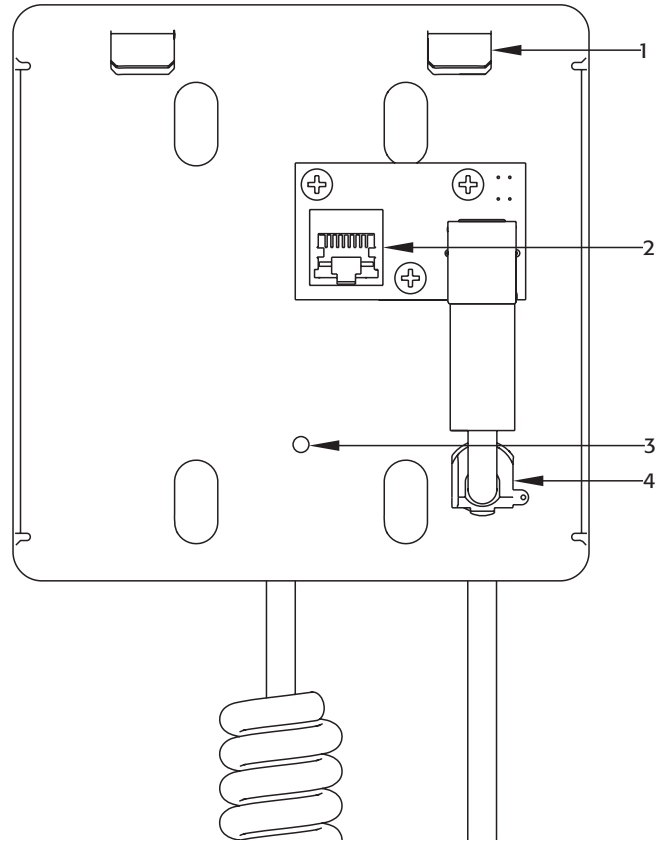


Figure 2

- 1. Mounting Tabs
- 2. RJ-45 Connector (to Page Station)
- 3. Mounting Screw hole
- 4. Locking Strain Relief

## The Q-Sys Q-LAN Network

The Q-Sys solution (Figure 3) is designed to be deployed on QSC's high performance Q-LAN network. Q-LAN is a proprietary network implementation that bundles several industry standard protocols into a data transport solution appropriate for live performance multimedia environments. Q-LAN offers gigabit data rates, device and network redundancy, 32-bit floating point audio data transfers, and low-latency support on local area network deployments. Accurate synchronization of end nodes and high-quality clock distribution are built into the Q-LAN solution using the IEEE-1588 Precision Time Protocol. Discovery of end nodes and auto-configuration of end nodes are all included in the solution using industry standard protocols over a standards-based IP network implementation using off-the-shelf hardware components.

Figure 3 shows a very simple Q-LAN network implementation with a Q-Sys Core Processor, a Q-Sys I/O Frame, a Q-Sys PS-X Page Station Expander, Ethernet switch, and a PC running Q-Sys Designer.

All devices are connected to a managed 1000 Mbps Ethernet switch that includes the appropriate QoS, (Quality of Service) suitable for a high-performance gigabit network to support multimedia applications.

The PS-X is configured via Q-Sys Designer when you configure your Page Station.



**NOTE:** A PC is only required during initial configuration of the system or when a PC is the preferred means for providing on-going management services to the system designer or operator.

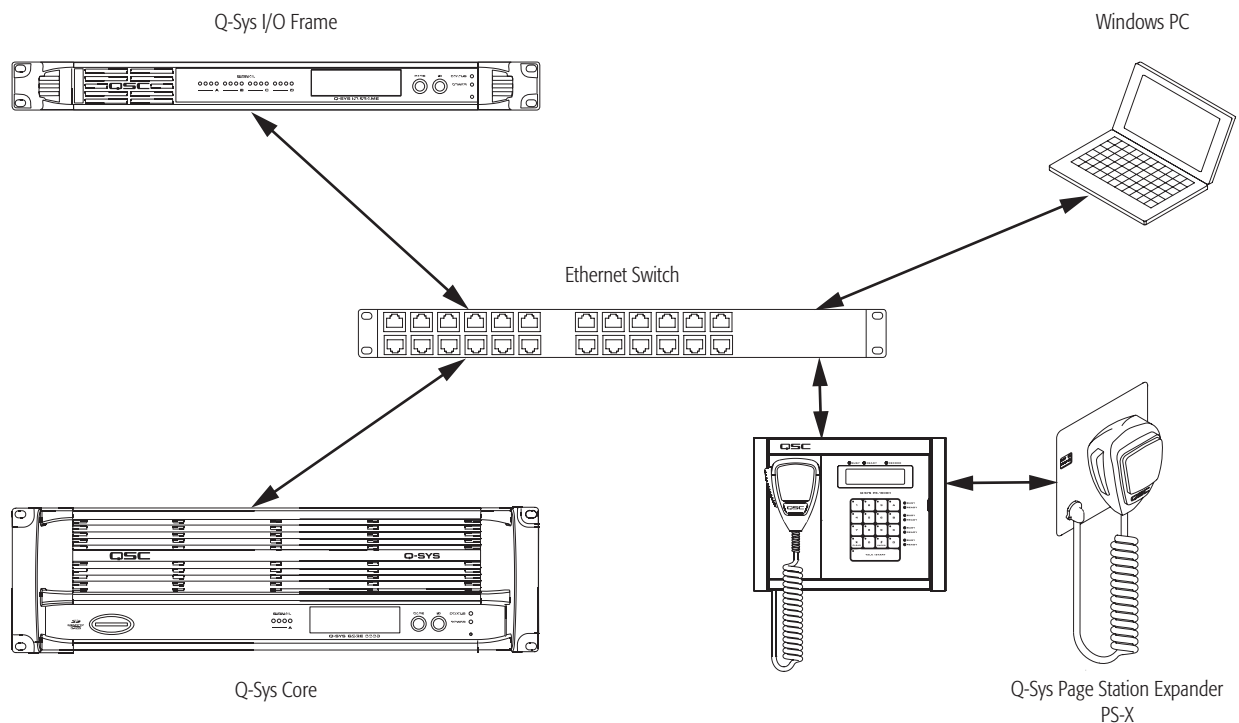




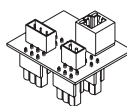
Figure 3

- The Q-Sys I/O Frame provides an audio access point for the Q-Sys system by providing the means to get audio onto and off of the Q-LAN network.
- The Q-Sys Core Processor provides signal processing, distribution, and management services for the Q-Sys system. All time-sensitive audio and management communications traverse the Q-LAN network.
- The Windows PC can be a desktop or laptop running Q-Sys Designer or the User Control Interface (UCI) remote management application. The PC is only required by the Q-Sys system during the design phase for configuring the system. The PC is not required for runtime operation, though it may be used for on-going system management
- The Q-Sys PS-X in conjunction with the Q-Sys Page Station and the Core Processor, provide the capability of using two dedicated microphones for a single Page Station in the same physical area.

# Unpacking

There are no special unpacking precautions. However, it is recommended that you keep the original packing materials for reuse in the rare event that service is required. If service is required and the original packing material is not available, ensure that the unit is adequately protected for shipment (use a strong box of appropriate size, sufficient packing/padding material to prevent load shifting or impact damage) or call QSC's Technical Services Group for replacement packing material and a carton.

## PS-X Packing List

| Part Name                      | Qty | Description   |
|--------------------------------|-----|---|
| PS-X – Page Station Expander   | 1   |  |
| Mounting Bracket               | 1   |  |
| Page Station Connector Adapter | 1   |  |
| Flat-head screw                | 1   | #8-32, 0.5"   |
| Warning information sheet      | 1   |   |
| Q-Sys PS-X Quick Start Guide   | 1   | TD-000358-00  |

## Installation

The Q-Sys PS-X is mounted using a new construction, UL listed, 2-gang electrical box.

### General Requirements

- The PS-X must have access to a Cat 5e connection (RJ45 Class 2) to the associated Q-Sys Page Station.
- The PS-X must be mounted in a wall no less than 2.38" (60.5 mm) deep.
- The PS-X should be mounted in a location where it will not be an obstruction to normal traffic.
- The Cat 5e cable must be less than or equal to 100 meters.

## Mounting the Mounting Bracket to a 2-Gang Electrical Box - New Construction



**NOTE:** The mounting procedure for an old-construction 2-gang box is the same, however not all old-construction boxes will work with the PS-X. Be sure you verify the fit before installing the old-construction box in the wall.

The 2-gang electrical box must be UL listed, and should be installed in the wall, during construction, with the Cat 5e cable pre-wired.

Refer to Figure 4.

1. Place the Mounting Bracket on the wall aligning the holes in the Mounting Bracket (2) with the holes in the 2-gang box (1).
2. Use four Mounting Bracket Screws (3) and an appropriate screwdriver to secure the Mounting Bracket to the 2-gang box.

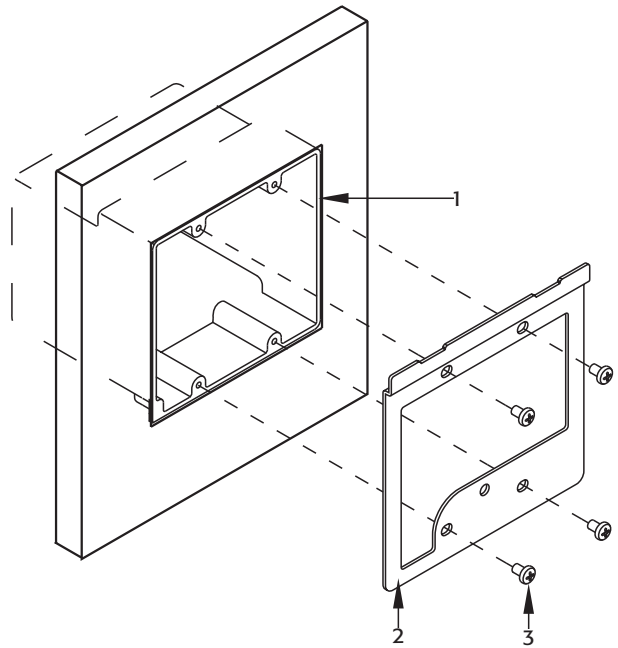


Figure 4

## Mounting the PS-X to the Mounting Bracket

Refer to Figure 5.

1. Feed the Cat 5e cable (1) with a Class 2 RJ45 connector, through the Mounting Bracket (2), and plug it into the RJ45 socket (3) on the back of the PS-X.
2. Carefully angle the top of the PS-X forward (towards the wall), and slide the PS-X onto the Mounting Bracket (1) inserting the two mounting tabs (4) into the mounting tab receptacles (5). Make sure the cable is fed carefully into the box or wall and is not binding anywhere.
3. After engaging the tabs, straighten the PS-X, pull slightly down, and push in on the bottom.
4. Secure the PS-X to the Mounting Bracket with one counter sunk Phillips screw (5) inserted in the hole (6) in the PS-X microphone docking plate.

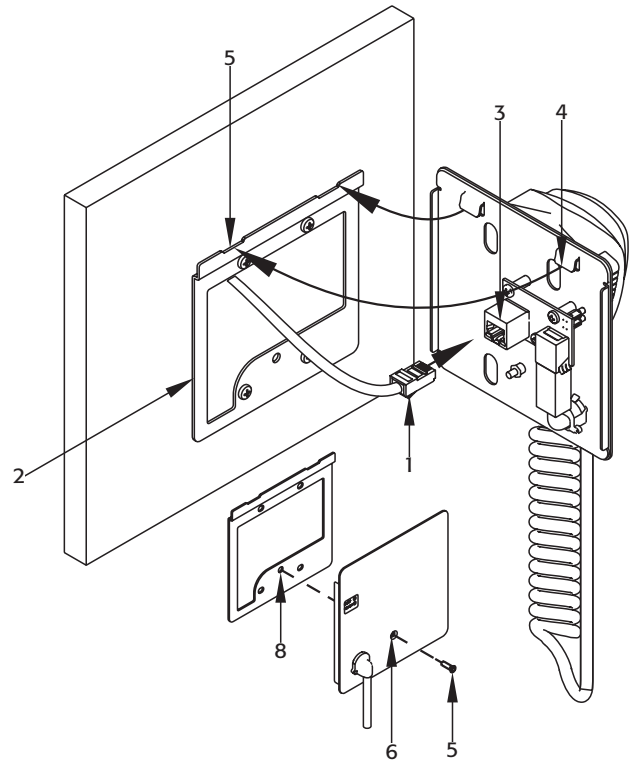


Figure 5

## Page Station Connector Adaptor Labeling

Refer to Figure 6

When you connect the adaptor to the Page Station, it makes use of the GPIO and Mic/Line connectors on the Page Station and the labels on the back of the Page Station are no longer relevant. Refer to the Page Station User Manual for details. The following Page Station connectors are available for use.

1. RJ-45 connector to the PS-X (J5)
2. Aux Power (J4)
3. Line Out (J3)

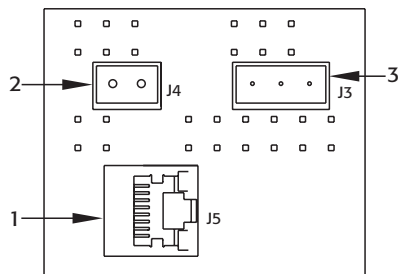


Figure 6



# Computer Requirements & Software Installation

Configuration of the PS-X requires a Q-Sys Core Processor, a PC running Q-Sys Designer software, and a Q-Sys Page Station both connected to the Q-LAN network. The latest version of Q-Sys Designer may be downloaded from the QSC website (<http://www.qscaudio.com/>). Additionally, all Q-Sys Core Processors include a Q-Sys Designer CD-ROM. For more information regarding system requirements and installation instructions, refer to the Q-Sys Designer installation instructions on the QSC website or in the Core Processor's Q-Sys Hardware User Manual.

## Connections

The Q-Sys Page Station Expander connects to any of the Q-Sys Page Station models. A Cat 5e cable, both ends terminated with a Class 2 RJ-45 connector, and the Page Station Connector Adapter is all that is needed. The cable must be 100 meters or less.

Refer to Figure 7.

1. Plug the Page Station Connector Adapter (1) into the back of the Page Station (2) as shown.
2. Be sure the adapter is plugged in all the way, and secure in place.
3. Plug the Cat 5e cable RJ-45 connector (3) into the RJ-45 receptacle on the adapter.



**NOTE:** The other end of the Cat 5e cable should be connected to the PS-X as described earlier in this document.

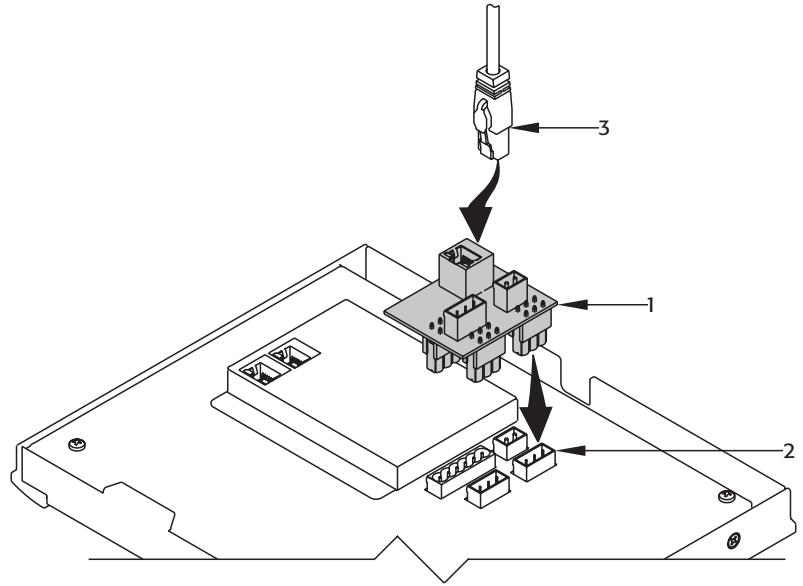


Figure 7

Mount or re-mount the Page Station in accordance with the Page Station User Manual.

## Configuring the Page Station for the PS-X in Q-Sys

Before you can use the PS-X, you must configure the Page Station in Q-Sys Designer.

1. Start Q-Sys Designer on the PC.
2. Open the design running on the appropriate Core.
3. In Q-Sys Designer, be sure the Page Station is in the design, then select the Status component of the Page Station to which the PS-X is connected.
4. In the Properties for the Page Station, set the Enable Expander to Yes.
5. Open the Mic/Control component for the Page Station. There are now two sets of controls. One for the Main Mic, the other for the Expander (Xpander). Use these controls to set the correct levels for the PS-X. Refer to the online help for details.

The PS-X is now ready to use. The PC is no longer required for the operation of your Q-Sys system.

## Using the PS-X

For the most part, using the PS-X depends on the configuration of the Page Station in the design created for your installation by your system designer. To make a page, the Ready LED on the PS-X must be illuminated, then just hold the handheld mic button, and begin talking. Release the button when you are finished. Review the Page Station documentation, both the user manual and the online help for Page Station configuration.

### Identifying the PS-X in Q-Sys Designer

If you have a large number of PS-Xs in your design, it may be difficult to find which component in the design matches a specific piece of hardware. The way to locate the PS-X is to locate the Page Station to which it is connected.

1. Click the ID button in the Page Station Status component in Q-Sys Designer, or the Page Station in Q-Sys Configurator. The LCD on the associated Page Station flashes.

### Updating Firmware

There is no firmware residing on the PS-X. Firmware updates are made to the Page Station. Refer to the Page Station user manual, or the Q-Sys Designer online help.

# PS-X Dimensions

The microphone cord is not included in the dimensions.

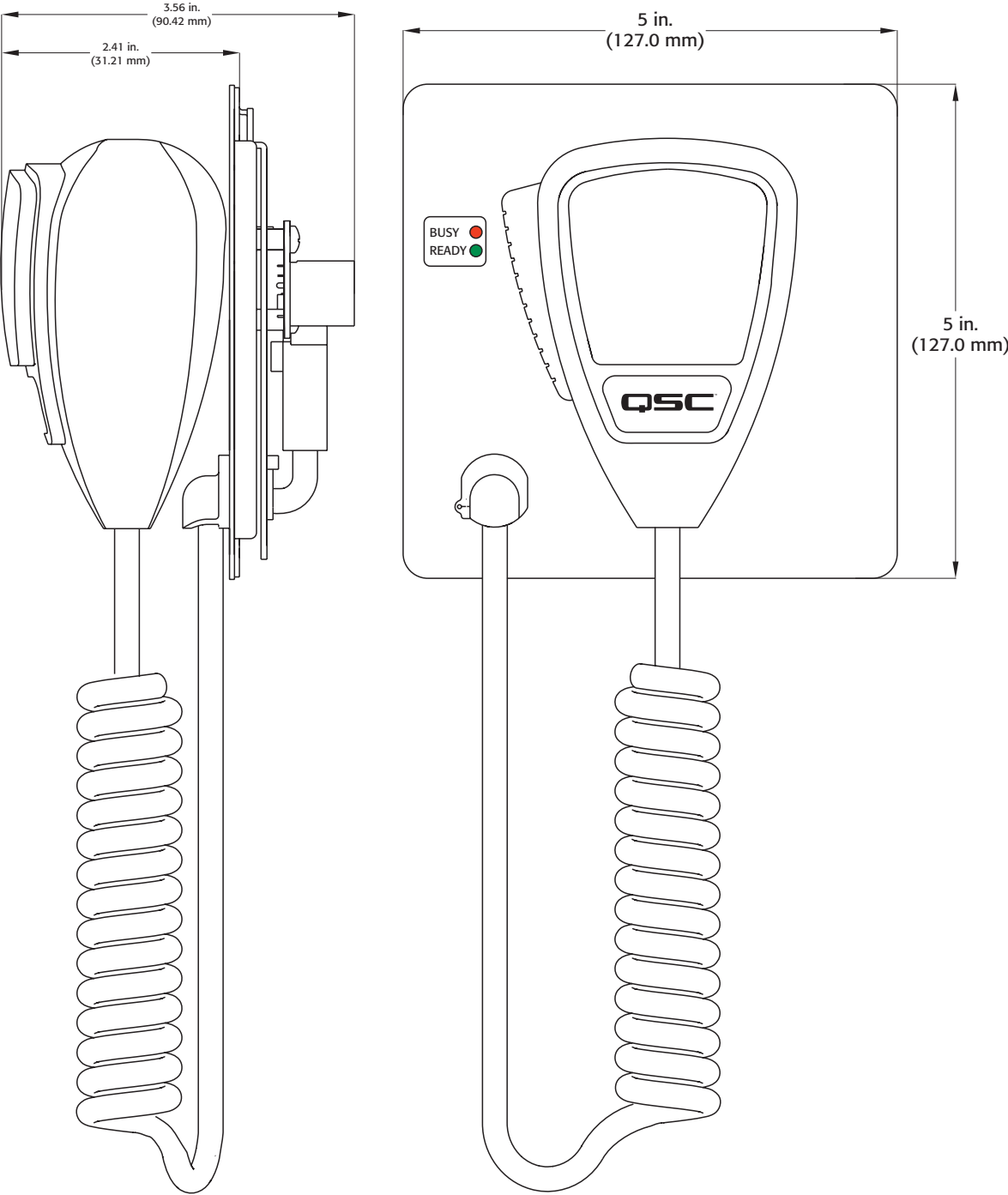


Figure 8

EN

# PS-X Specifications

## Front Panel

|                            |  |
|----------------------------|--|
| Microphone                 | Handheld, push-to-talk, dynamic microphone   |
| Microphone docking surface | Ferromagnetic material   |
| Status LEDs                | Green = Ready, Red = Busy  |
| Status LED Power Source    | Q-Sys Page Station GPIO<br>Digital one = TTL 3.3 VDC @ 2 mA<br>Digital zero is 0 V |

## Rear Panel Connectors

|      |   |
|------|---|
| RJ45 | Cat 5e Connection to a Q-Sys Page Station |
|------|---|

## Dimensions (HWD)

|                            |   |
|----------------------------|---|
| Microphone docking surface | 5 in. x 5 in. x 3.56 in. (127.0 mm x 127.0 mm x 90.42 mm) |
|----------------------------|---|

|                 |                  |
|-----------------|------------------|
| Shipping Weight | 2 lbs. (0.90 kg) |
|-----------------|------------------|



## Contact

### *Mailing Address*

QSC Audio Products, LLC  
1675 MacArthur Boulevard  
Costa Mesa, CA 92626-1468 U.S.

### *Main Number*

(714) 754-6175

### *World Wide Web*

[www.qscaudio.com](http://www.qscaudio.com)

## Sales & Marketing

### *Voice*

(714) 957-7100 International  
Toll free (U.S. only) (800) 854-4079

### *FAX*

(714) 754-6174

### *E-mail*

[info@qscaudio.com](mailto:info@qscaudio.com)

## Support

### *24/7 Support*

QSC offers 24/7 support on Q-Sys™  
Networked Audio Systems only.

### *Full Support*

Business Hours: 6 AM to 5 PM Pacific Time (Mon-Fri)

Tel. 800-772-2834 (U.S. only)

Tel. +1 (714) 957-7150

Fax. +1 (714) 754-6173

### *Q-Sys Emergency-only After-Hours and Weekend Support\**

Tel: +1-888-252-4836 (U.S./Canada)

Tel: +1-949-791-7722 (non-U.S.)

\* After hours calls are guaranteed a 30 minute response time from a Q-Sys Support Team member for Q-Sys ONLY!

### *E-mail*

[qsysupport@qscaudio.com](mailto:qsysupport@qscaudio.com)

(immediate e-mail response not guaranteed. For URGENT issues use the phone numbers above.)

