

QE 16/0

16-Port 10BASE-T Ethernet Hub for QSControl2 Audio Control & Monitoring Networks

USER MANUAL



Figure 1: QE 16/0 front panel

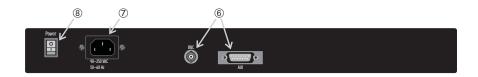


Figure 2: QE 16/0 rear panel

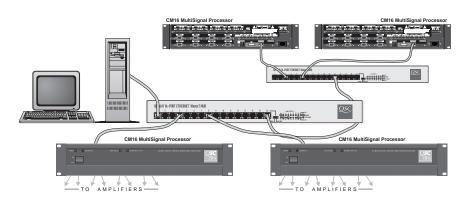


Figure 3: QE 16/0 hub in a QSControl2 network

OSC Model QE 16/0

Quick Install Guide

16-Port RJ-45 + BNC/AUI Ethernet Hub for QSControl2™ Audio Systems

Introduction

The QSC Audio Model QE 16/0 is a multi-port Ethernet hub that allows flexibility and versatility in audio control LAN topologies. It has 16 RJ-45 ports for unshielded twisted pair (UTP) network cabling, as well as a BNC/AUI port for direct connection to network segments using different media. The QE 16/0 hub constantly monitors each port for signal quality and will disconnect (partition) a device producing noise or excessive collisions and will then automatically reconnect it when the offending condition clears.

Hub Features (see diagrams on previous page)

① Power LED Indicates the hub has AC power and is turned on.

② Collision LFD Indicates a packet collision.

3 Link/Activity LED A steady green light indicates a good cable link between the hub

and the network device connected to that port:

A blinking green light indicates network activity.

4 Uplink Switch (Port 16) Slide switch: *left* = Normal mode; *right* = Uplink mode © R J-45 Ports

Configurable as 16 normal UTP ports

or 15 normal UTP ports plus one UTP uplink port (Port 16). 6 BNC and AUI Ports BNC or AUI for connection to a LAN seament using different

media.

⑦ IEC connector For AC power cord. The internal power supply automatically

senses 90-250 VAC

ON/OFF power switch

Features:

- Allows interconnection of Thin (BNC) and UTP segments without other intermediate media conversion devices.
- Connects up to 16 UTP 10BASET segments and one Thin (BNC) and/or one Thick (AUI) Ethernet seament.
- Detects network collisions and alerts all participating host devices. Amplifies and re-times received signals and transmits the signals to attached host devices in the event of a collision.
- Preamble regeneration, signal retiring and restoration, extension of fragmented packets and jabber function for automatic partitioning to isolate network failure.
- Global power, collision, partition LEDs and individual port Link/RX or Link/Activity LED to aid network diagnosis and management.
- Performs full 10 Mbps Ethernet multi-port repeater functions and complies with IEEE 802.3 standard for 10BASET Unshielded Twisted Pair (UTP) and 10BASE2 Thin Coaxial (BNC) or 10BASE5 Thick Coaxial (AUI).

Specifications:

• Industry standards: Complies with IEEE 802.3, 10BASET standard, FCC Class A, CE

Mark.

• **Interface:** 16 station ports for clients, servers, or other hubs. A designated

Uplink port allows cascading to another hub.

• **Uplink port:** Requires UTP cable (Category 3, 4, or 5). Segment length can be up

to 100 meters. When cascading using this port, the maximum segment

length is 5 meters.

• **Power supply** Internally auto-sensing from 90 VAC to 250 VAC. Power consump-

tion is 50 W maximum.

• **Environment:** Operating temperature: 0° C to 50° C; (Storage temperature: -20° C to

70° C); Operating humidity: 10% to 80% RH; (Storage humidity: 5% to

91% RH). [RH = Relative Humidity].

• **Physical dimensions:** $107 \times 482 \times 44.4 \text{ mm [L (depth)} \times W \times H]$; 1 RU rack-mountable

Weight: 3 kg. (6.5 lb.)Safety: LVD certified.

LED Indicators

The QSC QE 16/0 Ethernet hub uses front panel LED indicators to display its operating status: power on, link & activity status, and collision. The LEDs can function as useful troubleshooting aids.

Troubleshooting

The table below lists the LED indicators of the *QE 16/0*, what they should display in normal operation, and what might cause an abnormal indication.

LED Indicator Power (green)	Normal indication On	What it tells you If it's not on: 1.) Make sure the AC power cord is properly inserted into the hub and the AC outlet. 2.) Make sure the power switch is on.
Link/Activity (green)	On or flashing	If the LED glows green steadily, it indicates that the port detects the 10BASET network carrier signal. If the LED flashes, it indicates network activity—i.e., the port is transmitting or receiving data.
Collision (red)	Off	If the LED flashes, it indicates that 2 or more network nodes have tried to access the network simultaneously. Occasional occurrences are normal and will not affect network performance. If the LED flashes repeatedly or continuously, one or more nodes may be malfunctioning, or there may be other devices utilizing the network heavily.

FCC NOTICE: This device has been tested and found to comply with the limits for a Class A 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 device 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 device does cause harmful interference to radio or television reception, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Connect the computer into an outlet on a circuit different from that to which the receiver is connected.
- Increase the separation between the computer and receiver.
- · Consult the dealer or an experienced radio/TV technician for help.

Caution: Any changes or modifications not expressly approved by the grantee of this device could void the user's authority to operate the equipment.

FCC Compliance Statement: 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.

DECLARATION OF CONFORMITY: The QSC Model 16/0 16-Port Ethernet Hub conforms to the following Product Standards: Radiated Emission Standards: EN55022A, FCC Part 15 Class A; Conducted Emission Standards: EN60555 Pt 2 conducted emission; EN55022A conducted emission, FCC Part 15 Class A; Immunity Standards: IEC 801-2; IEC 801-3; IEC 801-4; Low Voltage Directive: EN60950 Therefore, this product is in conformity with the following regional standards: FCC Class A—following the provisions of FCC Part 15 directive; CE Mark—following the provisions of the EC directive.

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OSC Audio Products, Inc.
1675 MacArthur Divid Costa Mesa, California 92626

Phone: (714) 754-6175 Fax: (714) 754-6174

e-mail: info@qscaudio.com Web: www.qscaudio.com