# MicroComm
# INSTALLATION INSTRUCTIONS

## QCB-120-6 Quick Connect Board
## QCA-120-1 Quick Connect Adaptor

## 1 Intent & Scope

This document describes the installation procedure for the QCB-120-6 Quick Connector Board, which is used with up to four QCA-120-1 Quick Connect Adapters. Each QCA provides up to four channels, each of the four channels can be set independently as line level input or line level output.

## 2 Description

The QCB-120-6 is a 3U unit that mounts on a standard 19” equipment rack. As delivered from the factory the QCB-120-6 provide 16 channels that can be used to interface the audio lines from a DXL SCC-300 or SCC-400 station card to intercom stations. The QCA-120-1 is a 4 channel station port adaptor that mates to a QCB-120-6 and can convert a set of 4 consecutive channels into a line level output or line level input. The first channel on the QBA-120-1 can be set to act as a line level input or line level output, while the remaining 3 channels can individually be set as line level input, line level output or act as an interface to 400 or 300 series intercom stations. When configured as a line level output with 400 series station cards an isolated floating output is provided for muting an external amplifier when audio is not being transmitted.

## 3 Installation

### 3.1 QCB-120-6

A diagram of the QCB-120-6 is shown below. As supplied from the factory each of the sixteen 4-pin connectors, labeled CN1 to CN16 has two shorting jumpers that connect pin 1 to pin 2 and pin 3 to pin 4. This connects the wiring from the DB connector through to the corresponding terminals on the terminal block.

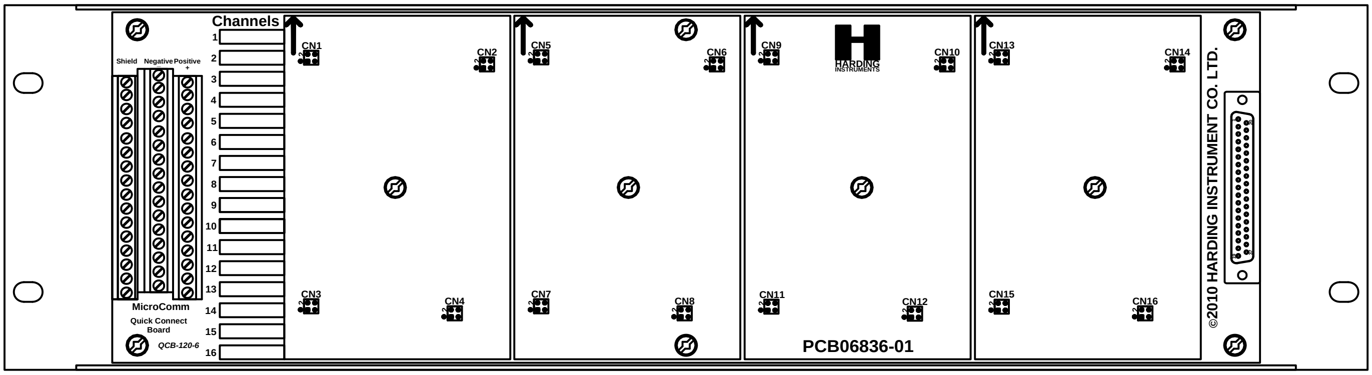

**Figure 1 QCB-120-6**

The field devices are connected to the QCB via the 3-tier screw terminal connector are as follows:

| TB Pin | Row #1 (Shortest) | Row #2 | Row #3 (Tallest) |
|---|---|---|---|
| 1 | Aud_Shield1 | Aud_Neg1 | Aud_Pos1 |
| 2 | Aud_Shield2 | Aud_Neg2 | Aud_Pos2 |
| 3 | Aud_ Shield3 | Aud_Neg3 | Aud_Pos3 |
| 4 | Aud_Shield4 | Aud_Neg4 | Aud_Pos4 |
| 5 | Aud_Shield5 | Aud_Neg5 | Aud_Pos5 |
| 6 | Aud_Shield6 | Aud_Neg6 | Aud_Pos6 |
| 7 | Aud_Shield7 | Aud_Neg7 | Aud_Pos7 |
| 8 | Aud_Shield8 | Aud_Neg8 | Aud_Pos8 |
| 9 | Aud_Shield9 | Aud_Neg9 | Aud_Pos9 |
| 10 | Aud_Shield10 | Aud_Neg10 | Aud_Pos10 |
| 11 | Aud_Shield11 | Aud_Neg11 | Aud_Pos11 |
| 12 | Aud_Shield12 | Aud_Neg12 | Aud_Pos12 |
| 13 | Aud_Shield13 | Aud_Neg13 | Aud_Pos13 |
| 14 | Aud_Shield14 | Aud_Neg14 | Aud_Pos14 |
| 15 | Aud_Shield15 | Aud_Neg15 | Aud_Pos15 |
| 16 | Aud_Shield16 | Aud_Neg16 | Aud_Pos16 |

**Table 1: Terminal Block (3 x 16)**

With the shorting jumpers installed the audio connections from the 3-tier terminal block are directly connected to the QCB's DB-37 pin female connector are as follows:

| DB37 Pin | Function |
|---|---|
| 1 | Aud_Pos1 |
| 20 | Aud_Neg1 |
| 2 | Aud_Pos2 |
| 21 | Aud_Neg2 |
| 3 | Aud_Pos3 |
| 22 | Aud_Neg3 |
| 4 | Aud_Pos4 |
| 23 | Aud_Neg4 |
| 5 | Aud_Shield1 - Aud_Shield4 |
| 24 | Aud_Shield5 - Aud_Shield8 |
| 6 | Aud_Pos5 |
| 25 | Aud_Neg5 |
| 7 | Aud_Pos6 |
| 26 | Aud_Neg6 |
| 8 | Aud_Pos7 |
| 27 | Aud_Neg7 |
| 9 | Aud_Pos8 |
| 28 | Aud_Neg8 |
| 10 | Aud_Pos9 |
| 29 | Aud_Neg9 |
| 11 | Aud_Pos10 |
| 30 | Aud_Neg10 |
| 12 | Aud_Pos11 |
| 31 | Aud_Neg11 |
| 13 | Aud_Pos12 |
| 32 | Aud_Neg12 |
| 14 | Aud_Shield9 - Aud_Shield12 |

| | |
|---|---|
| 33 | Aud_Shield13 - Aud_Shield16 |
| 15 | Aud_Pos13 |
| 34 | Aud_Neg13 |
| 16 | Aud_Pos14 |
| 35 | Aud_Neg14 |
| 17 | Aud_Pos15 |
| 36 | Aud_Neg15 |
| 18 | Aud_Pos16 |
| 37 | Aud_Neg16 |
| 19 | No Connect |

**Table 2: DB37 Connector**

A CBL-STN-AA-BC connects the DB-37 connector on the QCB-120-6 to the DB-37 connector on the SCC-300 or SCC-400 cards.

## 3.2 Installing the QCA-120-1

A diagram of the four channel QCA-120-1 is shown below:

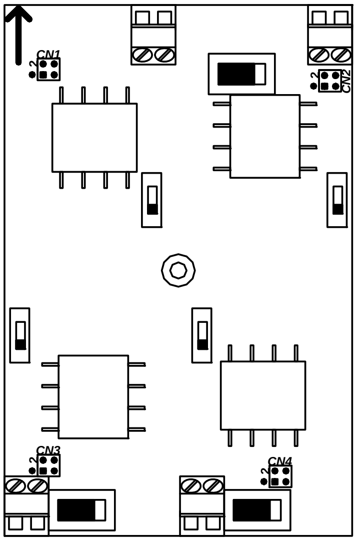

**Figure 2 QTA-120-1**

The QCA-120-1 is installed in one of the four positions designated on the QCB-120-6 (see Figure 1). The position of the arrows on the QCA and QCB should match. Remove the shorting jumpers from the four connectors on the QCB at the positions that will mate to the QCA. Remove the screws from the standoff at the center of the QCA installation position.. Once the connector pins CN1 to CN4 are mated with the 4 connectors on the QCB-120-6 install a #6 screw through the center hole of the QCA to the standoff on the QCB. Up to four QCAs can be connected to the QCB.

## 3.3 Setting the QCA channels

The following diagram shows a QCB-120-6 with two QCA-120-1s installed.

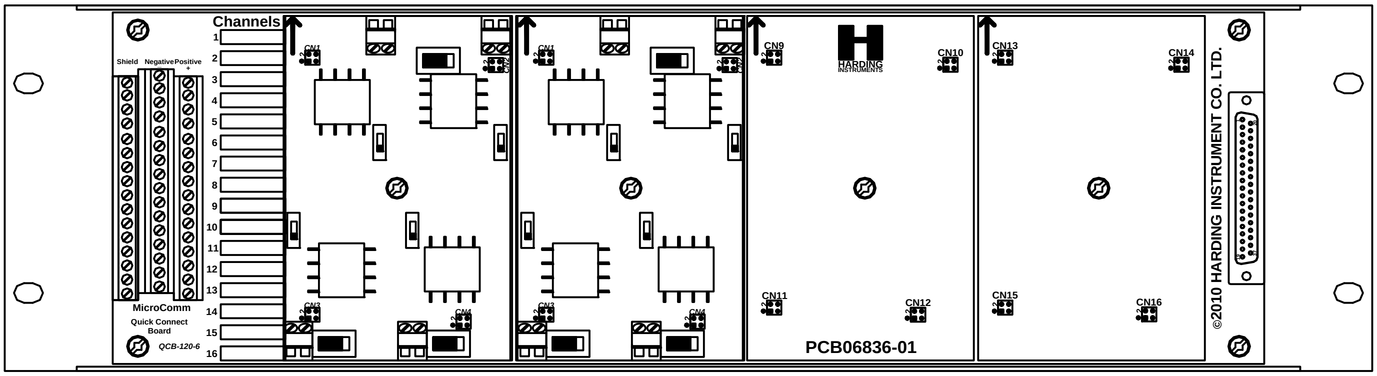

**Figure 3 QCB-120-6 with two QCA-120-1s installed**

The circuit board of the QCA is divided into 4 quadrants, each quadrant is associated with a specific channel. The following diagram shows the switch positions on the QCA to set a channel for line level input or line level output. Note that the line level input has two positions depending on whether the station cards are 300 or 400 series. The second switch associated with channels 2, 3 and 4 determines if the station port adapter circuitry is used.

When used as a line level output with 400 series station cards a two terminal screw connector provides a floating output that can be used to mute an external amplifier if audio is not being transmitted. The floating output is open when audio is transmitted and closed when no audio is preent.

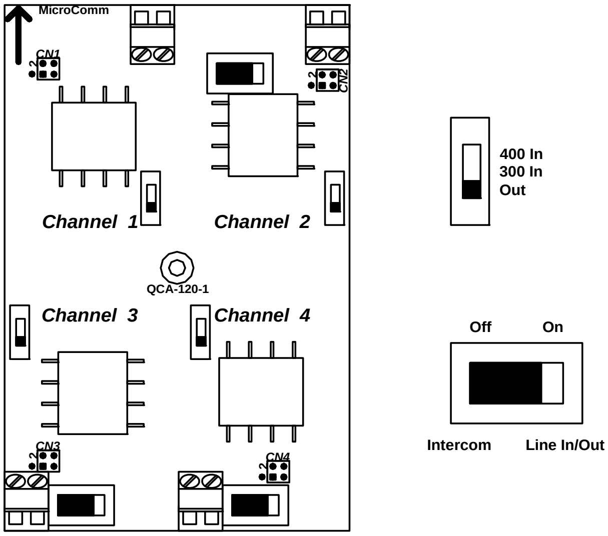

**Figure 4 Switch Positions on QCA for line level input or line level output and switch position to bypass station port adapter circuitry,**