

ClearOne®

Beamforming Microphone Array

Group Microphone for Professional Conferencing

Quick-Start Guide



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THE BEAMFORMING MICROPHONE ARRAY

The Beamforming Microphone Array is 24-microphone device with beamforming and adaptive steering technology designed specifically for the with CONVERGE® Pro products: 880, 840T, 880T, 880TA.

The Beamforming Microphone Array connects with the CONVERGE Pro through an Expansion Bus (E-bus) port: 3 arrays per supported CONVERGE Pro and up to 16 Beamforming Microphone Arrays can be daisy-chained in the site. The Power for the Beamforming Microphone Array is supplied through a Power-Over-Ethernet (PoE) connection.

The Beamforming Microphone Array is supported for use as a ceiling-mounted, wall-mounted or tabletop assembly.

IMPORTANT: The Beamforming Microphone Array only can be used with CONVERGE Pro systems operating at version 4.X software and firmware.

The latest version of the CONVERGE Pro firmware can be found on the ClearOne website at:

http://www.clearone.com/resources#professional_audio

The latest version of the Beamforming Microphone Array firmware and the Beamforming Microphone Array Installation Guide can be found on the ClearOne website at:

http://www.clearone.com/resources#professional_microphones

BEAMFORMING MICROPHONE ARRAY

QUICK-START OVERVIEW

Installing and using the Beamforming Microphone Array in your CONVERGE Pro site is subject to the following rules:

1. The Beamforming Microphone Array can only be used with CONVERGE Pro systems operating at version 4.X or greater, and requires that the firmware on the CONVERGE Pro and the Beamforming Microphone Array both be updated.
2. You must have a CONVERGE Pro 840T, 880, 880T and/or 880TA in the site. (The Beamforming Microphone Array will not work with standalone TH20, VH20, 8i, 1212, or 1212A units.)
3. You can have up to 3 Beamforming Microphone Arrays per valid CONVERGE Pro unit up to a total of 16 Beamforming Microphone Arrays per site. More valid CONVERGE Pro units may be added to increase the number of Beamforming Microphone Arrays.

Quick Start Procedures

These steps must be done in the following order to use the Beamforming Microphone Array in your CONVERGE Pro Site:

1. Update the CONVERGE Pro firmware to version 4.X using CONVERGE Console.
2. Connect the Beamforming Microphone Array to the updated CONVERGE Pro via the E-bus.

3. Update the Beamforming Microphone Array firmware using CONVERGE Console. (The Beamforming Microphone Array firmware can not be upgraded directly without an updated CONVERGE Pro.)
4. Using the Beamforming Microphone Array
5. Mounting the Beamforming Microphone Array

UPDATING THE CONVERGE PRO FIRMWARE

The 4.X versions of CONVERGE Console offer significant upgrades from previous versions. Beamforming Microphone Arrays are not recognized by CONVERGE Pro units running older versions.

ClearOne strongly encourages users to upgrade all firmware to the latest release version.

NOTE: Save the CONVERGE Console site file before performing any firmware upgrade.

Please follow the steps listed below to upgrade your firmware:

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Upgrading from CONVERGE Pro 3.X firmware

1. Remove any 1.X, 2.X and 4.X units from the stack by disconnecting the expansion bus link cable from the 3.X units.
2. Re-connect to the 3.X stack with CONVERGE Console.
3. Download the 4.X firmware file to the stack of units.
4. The units will default and reboot after the download of 4.X firmware.
5. Units are fully upgraded.
6. Verify units have been upgraded by checking the firmware version on the front panel.

Reconnect all E-bus cables, if needed, to complete the stack of units.

Upgrading from CONVERGE Pro 2.X firmware

1. Remove any 1.X, 3.X and 4.X units from the stack by disconnecting the expansion bus link cable from the 2.X units.
2. Re-connect to the 2.X stack with CONVERGE Console.
3. Download the 4.X firmware file to the stack of units.

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4. The units will default and reboot after the download of 4.X firmware. The 2.X to 4.X upgrade requires the firmware to be loaded twice to complete the version upgrade.
5. Units are fully upgraded.
6. Verify units have been upgraded by checking the firmware version on the front panel.

Reconnect all E-bus cables, if needed, to complete the stack of units.

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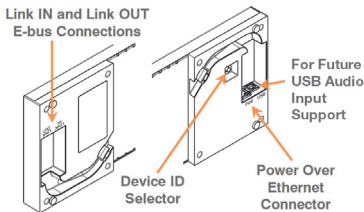
Upgrading from CONVERGE Pro 1.X firmware

1. Remove any 2.X, 3.X and 4.X units from the stack by disconnecting the expansion bus link cable from the 1.X units.
2. Re-connect to the 1.X stack with CONVERGE Console.
3. Download the 4.X firmware file to the stack of units.
4. The units will default and reboot after the download of 4.X firmware. The 1.X to 4.X upgrade requires the firmware to be loaded twice to complete the version upgrade.
5. Reconnect to the stack with CONVERGE Console. Download 4.X a second time to the units. The units will reboot.
6. Units are fully upgraded.
7. Verify units have been upgraded by checking the firmware version on the front panel.

Reconnect all E-bus cables, if needed, to complete the stack of units.

CONNECTING THE BEAMFORMING MICROPHONE ARRAY

Connect the Beamforming Microphone Array units to the CONVERGE Pro via the E-bus connections using CAT5-24AWG solid conductor RJ45 cables. Power can be through a standard Power-over-Ethernet switch or through an external PoE power supply.



NOTE: The PoE connection is only for power, not control. Power must be for individual units; no daisy-chain power is allowed. Firmware upgrades, etc. are performed via the E-bus connection.

Set each additional Beamforming Microphone Array unit to a unique ID using the Device ID selector rotary switch on the back of the unit. (Range 0-F)

BEAMFORMING MICROPHONE ARRAY

UPDATING THE FIRMWARE OF THE BEAMFORMING MICROPHONE ARRAY

NOTE: All CONVERGE Pro units in the site must be running firmware level 4.X to be compatible with the Beamforming Microphone Array. Before continuing, follow the appropriate procedure above to update the firmware on the CONVERGE Pro units.

1. Connect the E-bus cable between the CONVERGE Pro units and the Beamforming Microphone Arrays.
2. Connect the CONVERGE Pro units with CONVERGE Console.
3. Open the Firmware Loader screen.
4. Browse for the bf_mic.mdo file.
5. Download the Beamforming Microphone Array firmware.
6. The Beamforming Microphone Array(s) will default and reboot after the download of 4.X firmware.
7. Units are fully upgraded. (All Beamforming Microphone Array units connected via the E-bus on the site are simultaneously updated.)
8. Restore the saved site file to the system using CONVERGE Console.

USING THE BEAMFORMING MICROPHONE ARRAY

The Beamforming Microphone Array must be added to the site using the CONVERGE Console 4.X software. This software also provides the capability of configuring the pickup pattern and other characteristics available in Configuration mode. Refer to the online help available with the CONVERGE Pro software.

VOLUME & MUTE

These controls are available through the controller configured for your CONVERGE Pro site.

MICROPHONE ARRAY LED INDICATORS

The illuminated microphone indicators at the ends of the Beamforming Microphone Array show blue/red when the microphone array is active/muted. You can set the indicators to remain off by using CONVERGE Console to change Unit Properties for the Beamforming Microphone Array. See the help file for more details.

CONVERGE CONSOLE AND CONSOLE MANAGER

The CONVERGE Console 4.0 installer only comes with CONVERGE Console 4.0. CONVERGE Console versions 3, 2 and 1 are not part of the install like that of CONVERGE Console Installer 3.0.

A new version CONVERGE Manager comes with the CONVERGE Console 4.0 installer. If CONVERGE Console 3 is installed the, CONVERGE Manager will show all 4 versions of CONVERGE Console, 1.0, 2.0, 3.0, and 4.0. If CONVERGE Console 3 is not installed, then the CONVERGE Manager will only show CONVERGE Console 4.

BEAMFORMING MICROPHONE ARRAY

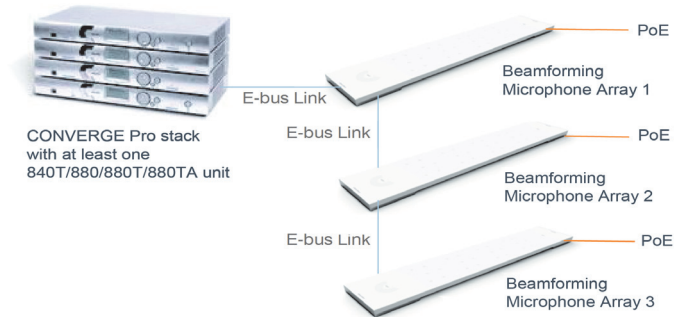
MOUNTING THE BEAMFORMING MICROPHONE ARRAY

The array can be ceiling-mounted in either a suspended or solid ceiling, or on a wall-mount assembly with the PoE and E-bus wiring passing through the mounting assembly and plugging into the Beamforming Microphone Array unit. Tabletop use is also supported with PoE and E-bus cables attached under the unit. Detailed instructions are included in the Beamforming Microphone Array Installation Guide available on the ClearOne website:

http://www.clearone.com/resources#professional_microphones



QUICK-START GUIDE



Part Numbers

- | | |
|----------------|--|
| 910-001-003 | Beamforming Microphone Array for CONVERGE Pro |
| 910-001-004 | PoE Power Supply and Cables Kit for Beamforming Microphone Array |
| 910-001-005-12 | Ceiling Mounting Kit with 12" Suspension Column for Beamforming Microphone Array |
| 910-001-005-24 | Ceiling Mounting Kit with 24" Suspension Column for Beamforming Microphone Array |
| 910-001-006 | Wall Mounting Kit for Beamforming Microphone Array |

BEAMFORMING MICROPHONE ARRAY

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