ClearOne

APPLICATION NOTE

PRODUCTS SUPPORTED:
CONVERGE® Pro models: 880, 880T, 880TA, 840T, 8i, SR1212, and SR1212A
INTERACT® Pro, INTERACT Pro 8i

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USING THE CONVERGE PRO AND INTERACT PRO WITH THE WS800 WIRELESS MICROPHONE SYSTEM

OVERVIEW

This document discusses how to connect the WS800 Wireless Microphone System with the following CONVERGE Pro and INTERACT Pro systems:

CONVERGE Pro System

- 880
- 880T
- 880TA
- 8i
- 840T
- SR1212
- SR1212A

INTERACT System

- INTERACT Pro
- INTERACT Pro 8i

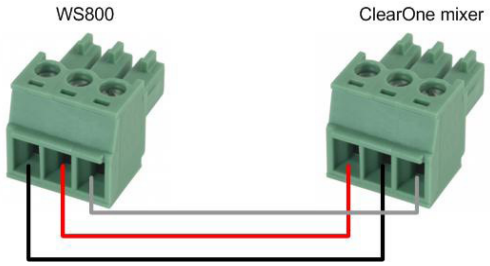
This document first explains the wiring required to connect the ClearOne CONVERGE Pro or INTERACT Pro and the WS800 wireless microphone system. It then discusses the settings required in the CONVERGE Pro or INTERACT Pro and the WS800. It assumes the reader is familiar with the setup of the CONVERGE Pro using CONVERGE Console or the setup of the INTERACT Pro using the INTERACT Software, as well as the WS800 using the ClearOne WS800 Remote Software. If there are questions about operation or setup of the WS800, this document or the CONVERGE Pro and INTERACT Pro product familes, please contact ClearOne Technical Support at 1-800-283-5936 or e-mail at tech.support@clearone.com.

The CONVERGE Pro and INTERACT Pro product families are installed audio conference systems designed to interoperate with a wide verity of microphones including the WS800 wireless microphone. The WS800 is an eight wireless microphone system that allows different types of wireless microphone including table top boundary, goose neck, hand held, and belt pack microphones. The outputs of the WS800 connect to the microphone inputs of the CONVERGE Pro or INTERACT Pro connector blocks on the back of the unit. Do not connect the WS800 outputs to the line inputs.

WIRING

The CONVERGE Pro and INTERACT Pro microphone inputs are analog balanced inputs using 3-pin phoenix connectors. The WS800 outputs are also analog balanced outputs using 3-pin phoenix connectors. A cable must be created to wire the output of the WS800 to the CONVERGE Pro microphone input. The pin outs are :

PIN	WS800 (Phoenix-type Connector)	CONVERGE PRO OR INTERACT PRO MIXER (Phoenix-type Connector)
1	Negative	Positive
2	Positive	Negative
3	Ground	Ground



INTERACT PRO SETTINGS

Using the INTERACT Software, connect to the INTERACT Pro site. Open the desired microphone channel. Turn off **Phantom Power**. The WS800 does not need Phantom Power for the microphones to operate. As a starting point, set the **Course Gain** to 28 dB. While looking at the **Post Gain Meter** talk in to the microphone and adjust the **Course Gain** until the **Post Gain Meter** peaks close to +6 dB. Adjust the **Fine Gain** so the **Post Gain Meter** peaks at +6 dB. (See Figure 1) For further assistance setting up the microphone channel gains see this Tech Note: http://www.clearone.com/uploads/resource/801_151_801_06_Optimizing_Gain_Structure_Rev1_0-1.pdf

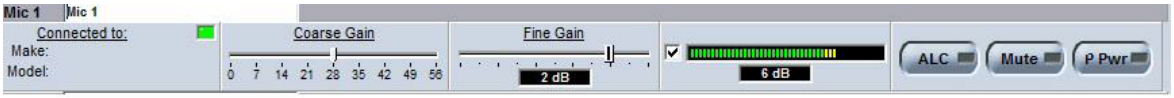


Figure 1.

The microphones used with the WS800 can be muted at the microphone, turned on and off, as well as drain the batteries. The AEC on the INTERACT Pro can be affected, producing echo, when any of these conditions occur. To avoid the AEC from being affected when these conditions occur, the INTERACT Pro offers a Push To Talk (PTT) mode. When this mode is enabled the AEC will detect when any of the conditions occur and will freeze the AEC process. To setup PTT mode click on the **AEC** button. On the right hand side of the AEC window is where the PTT mode setup. There are two settings for PTT, enabling/disabling the mode and the threshold. Enable PTT mode. Turn the microphone off or mute the microphone. The **Pre Gain Meter** will show the audio level of microphone. When the microphone is off or muted the **Pre Gain Meter** will show a level below -90 dB. Adjust the Threshold slider down to the level of the **Pre Gain Meter**. In the example in Figure 2, the Pre Gain Meter is showing a level of -95 dB so the Threshold is set to -95. When the AEC sees the -95 dB level the AEC will freeze. For further assistance on setting up PTT Mode see the Tech Note: http://www.clearone.com/uploads/resource/801_151_800_02_PTT_Mode_Rev1_0-3.pdf which details a similar procedure for the CONVERGE Pro, or consult the INTERACT Pro manual: http://www.clearone.com/uploads/resource/800_154_000_01_Rev2_1_INTERACT_Manual-4.pdf

Figure 2.

CONVERGE PRO SETTINGS

Using the CONVERGE Console, connect to the CONVERGE Pro site. Open the desired microphone channel. Turn off **Phantom Power**. The WS800 does not need Phantom Power for the microphones to operate. As a starting point, set the **Course Gain** to 28 dB. While looking at the **Post Gain Meter** talk in to the microphone and adjust the **Course Gain** until the **Post Gain Meter** peaks close to +6 dB. Adjust the **Fine Gain** so the **Post Gain Meter** peaks at +6 dB. (See Figure 3) For further assistance setting up the microphone channel gains see this Tech Note: http://www.clearone.com/uploads/resource/801_151_801_06_Optimizing_Gain_Structure_Rev1_0-1.pdf

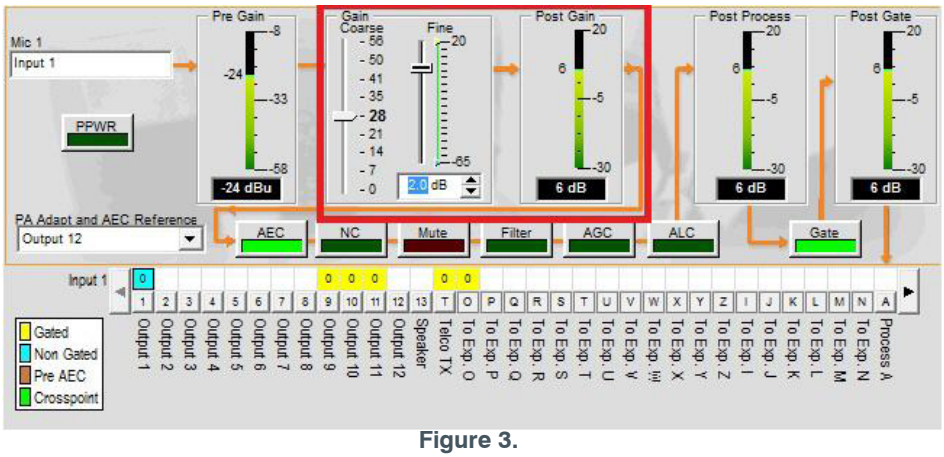


Figure 3.

» NOTE: The following section does not apply when using the WS800 with the CONVERGE SR1212 or CONVERGE SR1212A. Jump to the section Configuring the WS800.

The microphones used with the WS800 can be muted at the microphone, turned on and off, as well as drain the batteries. The AEC on the CONVERGE Pro can be affected, producing echo, when any of these conditions occur. To avoid the AEC from being affected when these conditions occur the CONVERGE Pro offers a Push To Talk (PTT) mode. When this mode is enabled the AEC will detect when any of the conditions occur and will freeze the AEC process. To setup PTT mode click on the **AEC** button. On the right hand side of the AEC window is where the PTT mode setup. There are two settings for PTT, enabling/disabling the mode and the threshold. Enable PTT mode. Turn the microphone off or mute the microphone. The **Pre Gain Meter** will show the audio level of microphone. When the microphone is off or muted the **Pre Gain Meter** will show a level below -90 dB. Adjust the Threshold slider down to the level of the **Pre Gain Meter**. In the example in Figure 4, the Pre Gain Meter is showing a level of -95 dB so the Threshold is set to -95. When the AEC sees the -95 dB level the AEC will freeze. For further assistance on setting up PTT Mode see the Tech Note: http://www.clearone.com/uploads/resource/801_151_800_02_PTT_Mode_Rev1_0-3.pdf

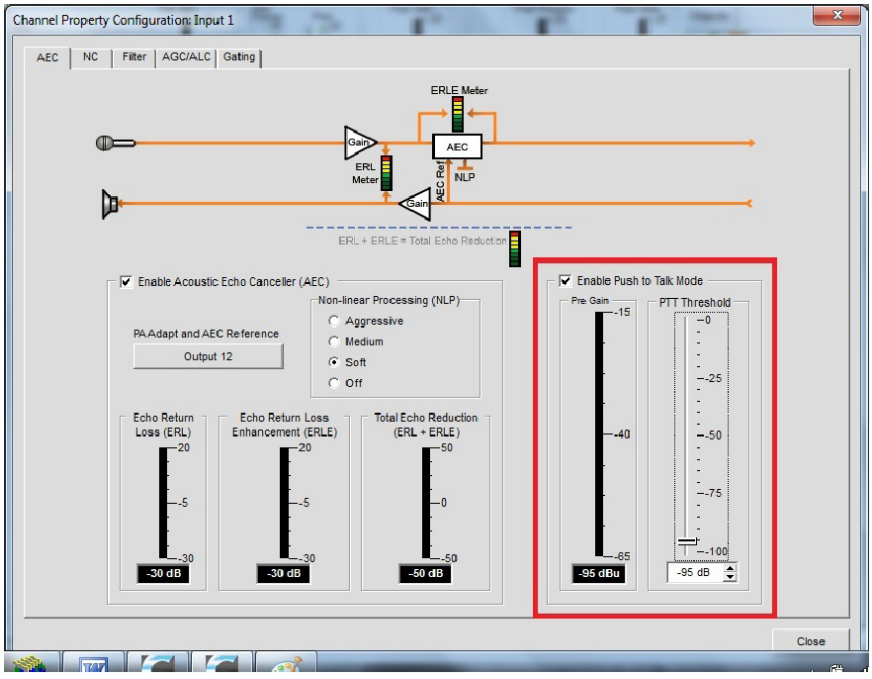


Figure 4.

CONFIGURING THE WS800

Connect the ClearOne WS800 units with its Remote Software. Select the desired microphone channel and edit the transmitter settings shown in Figure 5. Set the **TX Gain** to 0 dB. Set the **Mute Mode** to Hard Mute. Set the **Power Switch Mode** to On/Off. After making these changes you will need to synchronize the transmitter with the receiver. Refer to the WS800 Wireless Microphone System Quick Start Guide for more details.

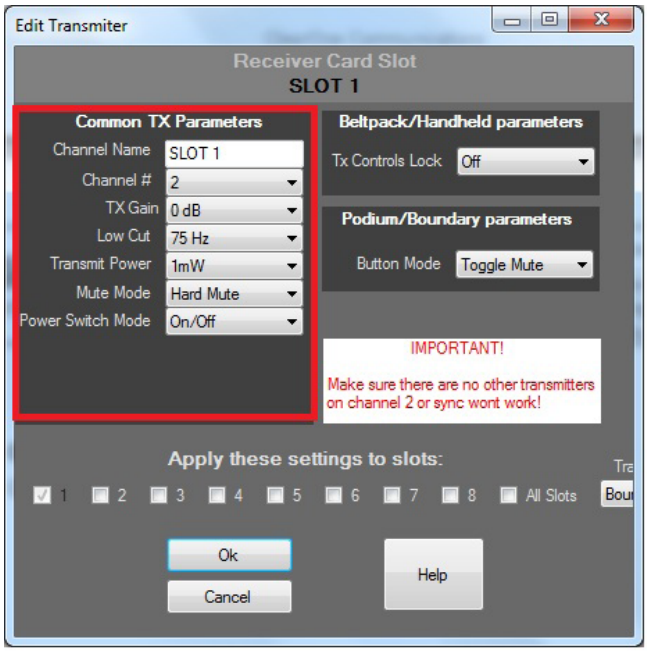


Figure 5.

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