

SolaCom Guardian Intelligent Workstation Audio Adjustments

Purpose

The purpose of this document is to instruct authorized PSAP personnel how to make adjustments to the SolaCom Guardian Intelligent Workstation and associated equipment to address common complaints regarding audio. Adjustments for most locations will be made in two locations:

- the Xonar DX Audio Center
- the Zetron Telephone Radio Headset Interface

Xonar DX Audio Center

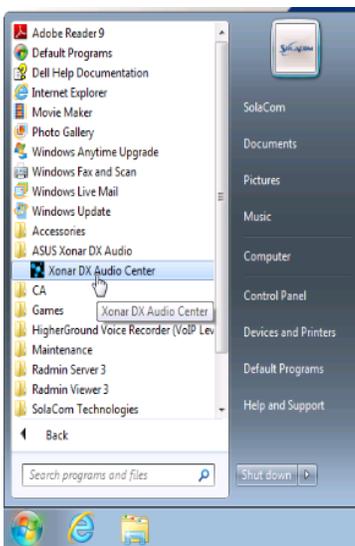


Figure 1

Your SolaCom position has two sound cards installed. The Conexant HD Audio soundcard is the original sound card that came with the computer. Provided the settings on your workstation are correct, this sound card handles ringer audio as well as audio from your Instant Retrieval Recorder (IRR).

The second sound card, the ASUS Xonar DX, handles incoming and outgoing call audio. Most audio adjustments will be handled through the Xonar DX Audio Center program. That program can be accessed through the Start menu in the manner shown in Figure 1.

Figure 2 shows the Xonar DX Audio Center once it is opened. If the lower half of the interface is missing once you open the program, it can be accessed by pressing the arrow, near letter 'A' in Figure 2.

The first adjustment should be the Master Volume Knob, near letter 'B' in Figure 2. The dot on the knob should be somewhere between the twelve o'clock and two o'clock position. **Excessive volume may cause a condition where the caller's voice will echo back to them.**

Next, make sure that the DSP mode buttons, shown in Figure 2 near letter 'C', are off. If the button is 'lighted' green, the button is 'on'.



Figure 2



Figure 3

The next adjustment should be 'Playback Volume'. If the screen does not look like Figure 2, press the 'Mixer' button found near letter 'D' followed by the 'Playback' button found near letter 'E'. **Only the 'Left Channel' slider button should be adjusted.** The 'Right Channel' does not work in this application. Once you start moving the slider, a number will appear showing percentage. The ideal setting is about 50%.

Figure 3 shows the 'Record' screen that adjusts the dispatcher's transmit audio. It can be accessed by pushing the button next to 'Playback'. Just as with 'Playback Audio,' adjusting the 'MIC' slider to about 50% is the preferred adjustment. **Your first step to rectify complaints about the dispatcher's audio being 'harsh' or 'static-filled' or a complaint about the caller hearing an echo should be to adjust the Master Volume first (the knob in Figure 3 near letter 'A').** Only adjust microphone volume below 50% if you have already adjusted Master Volume below the twelve o'clock position.

Figure 4 shows the last adjustment on the Xonar DX Audio Center. The 'Advance Setting' window is accessed by pressing the 'wrench' button on the Record screen. This button is found just above the letter 'A' in Figure 4. In most cases, you should make sure that the 'Microphone Boost' box is unchecked. If you have a position that does not have radio telephone integration (as of this writing, 09HQ-G-01 and 02, 7COM-G-06, and 9COM-G-09), it may be necessary to check this box in order for a wireless headset to have adequate volume.



Figure 4

Zetron Telephone Radio Headset Interface



Figure 5

All positions **with the exception of all 9COM positions but 9COM-G-09** have either one or two Zetron Telephone Radio Headset Interface boxes. These are generally located beneath the console furniture work surface near the operating position. Figure 5 shows a typical installation of the equipment. The knob on the right adjusts audio for radio. The knob on the left adjusts audio for phone. Turning the knob clockwise increases volume.

A common misconception is that adjustments on the front panel affect the dispatcher's microphone audio. This is incorrect. Adjusting the knobs will not affect how well field units or callers will hear the dispatcher.

Plantronics CA12CD PTT Adapter



Figure 6

The Plantronics CA12CD PTT Adapter (CA12CD) is the most common headset device used among Butler County PSAPs. While individual PSAPs are responsible for purchasing and maintaining these devices, this section is intended to provide guidance on adjustments that can be made to improve audio.

Figure 6 shows the top of the base unit of the CA12CD. The buttons on the top of the unit near letter 'A' provide fine adjustment for receive volume. **They do not affect the dispatcher's volume from the caller or field unit's perspective.**



Figure 7

Figure 7 shows the bottom of the base. The slider switches are coarse gain controls for the unit. The slider switch near letter 'B' adjusts microphone gain with the microphone becoming more sensitive as the numbers are greater. The other slider switch, near letter 'C', adjusts headset receiver gain with the audio becoming louder as numbers increase.

Figure 8 shows the remote unit for the CA12CD. It has a fine adjustment for receive audio located on the side of the unit near letter 'D' that is linked to the fine adjustment on the base unit.



Figure 6

Troubleshooting

If you are receiving complaints about the dispatcher's audio being harsh or distorted or if you are receiving complaints that the caller is hearing themselves as an 'echo', take the following steps in order until the problem is resolved:

- Ensure that 'Microphone Boost' is unchecked
- Reduce Master Volume on the Xonar DX Audio Center, but no lower than fifty percent (12:00 position). Ensure that the dispatcher can still hear the caller.
- Reduce Microphone level on the Xonar DX Audio Center
- Reduce left volume on the Zetron Telephone Radio Headset Interface. Ensure that the dispatcher can still hear the caller.
- Reduce Master Volume on the Xonar DX Audio Center further. Ensure that the dispatcher can still hear the caller.
- Call BRICS

If you are receiving complaints that the dispatcher's audio being too soft, take the following steps in order until the problem is resolved:

- Ensure that gain settings on your headset device are properly adjusted.
 - For example, if using a Plantronics CA12CD Wireless Headset (the most commonly used headset among Butler County PSAP's), make sure that the slider underneath the receiving base is adjusted to it's maximum level.
- Increase Microphone level on the Xonar DX Audio Center.
- Enable 'Microphone Boost'
- Increase Master Volume
- Call BRICS