

Technical Bulletin #1

This document provides best-practice recommendations for using your X-System. If you have any questions after reviewing this document, please consult the additional product documentation available at <http://www.coachcomm.com/product/x-system/#Support> or call Customer Support at 1.800.749.2761.

Updating Your System to Version 1.1

Have you updated your system to version 1.1? Doing so will help ensure your coaches' communications have all of the latest improvements and added features. Visit the [X-System Firmware Update Information](#) page for instructions on performing this important update if you have not done so already.

Updated Antenna and Mast Orientation

For best performance, after updating your system to version 1.1, we recommend a change in your system's antenna settings. This requires a change within the system's configuration file using our X-Ware software. After making these setting changes, only a single antenna will be needed on each Radio Transceiver. See the [How to Change Antenna Diversity Settings](#) document for more information.

After updating your antenna settings you will need to verify everything is working properly by doing a quick range test:

1. Turn on all Radio Packs (RPs) and ensure they log in by observing that the Link Quality (LQ) numbers on each RP's display are in the 90s.
2. Walk test each RP approximately 20–30 feet from the Radio Transceiver (RT) and ensure those LQ numbers remain in the 90s for each RP.
 - » If the LQ numbers drop below 90, contact CoachComm Customer Support at 1.800.749.2761 for assistance.



Figure 1: Radio Pack Screen - LQ Numbers

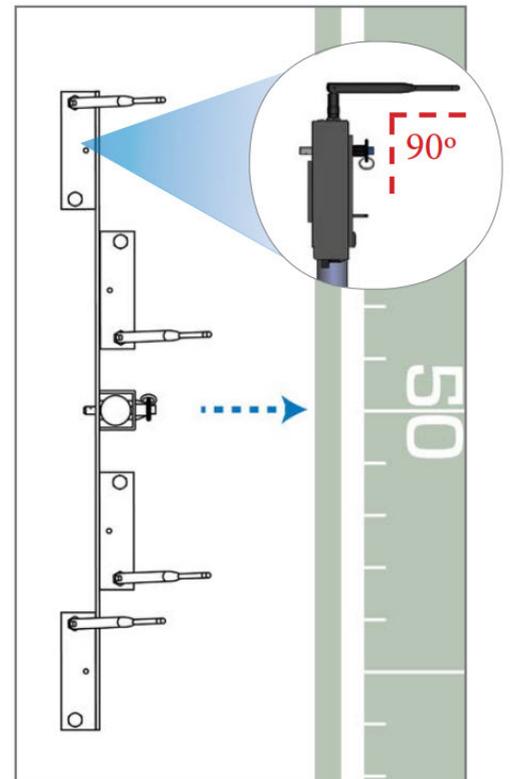


Figure 2: Antenna Orientation - Bracket Parallel to Sideline and Antennas Pointing To 50-Yard Line

Positioning Your System and Mast

Position your X-System at the 50-yard line and as close to the coaches as possible for optimal performance. In some cases, even 7-10 feet closer can improve LQ.

Align the mast so your RT mounting bracket(s) will be parallel to the sideline.

Bend the antennas so they are parallel to the ground (90° angle between the antenna and the RT) and point their tips toward the opposing team's RT mast.

Auto Null Your System Every Game

Auto Null must be done each time you set up your system. Nulling is required to electronically balance an audio device, in this case a Control Unit, with a 2-wire intercom system.

Important! *This procedure MUST NOT be performed while the system is in use in a game environment. This process uses audible tones that will disrupt communication between users.*

1. Ensure that all sideline and press box units are connected via stadium wiring and that wired BeltPacks are connected to the press box system prior to nulling.
2. Using X-Ware, null each Control Unit, one at a time, at initial system setup.

Note: *You may also null a system from the Control Unit menu without X-Ware. The **Run Auto Null** command is found under the **Wired Settings** menu.*

X-Ware Auto Null Screens

The Auto Null function is available from the Conferences View in X-Ware. To null a Control Unit, follow the steps below:

1. Select the Auto Null button on the Control Unit you wish to null.
2. Confirm your decision to auto null on the prompt that displays.



Figure 3: X-Ware Auto-Null Command

3. Once nulling begins, a nulling status screen will display, indicating that null is in process on the Control Unit's port indicated in red.

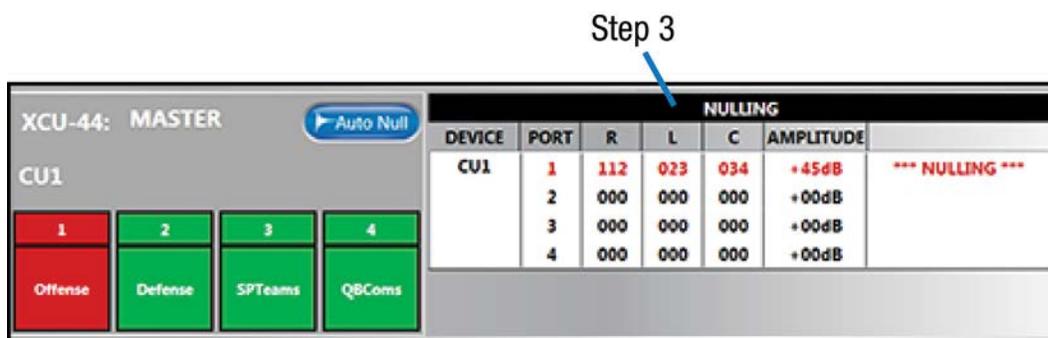


Figure 4: X-Ware Auto-Null In Progress

Turning On 2-Wire Ports and Adjusting Levels

Some teams elect to turn off their 2-Wire ports for each Control Unit (CU) so they can use the Sideline Cart alone for wireless communication during practice. **Always make sure that the 2-Wire ports are ON and set to AudioCom prior to game day. Failure to do so will result in no communication between wireless Radio Packs (RPs) and the wired system.**

To turn ports ON:

1. Navigate through the CU menu to **Wired Settings > Intercom Settings**.
2. Select a 2-Wire port (**2W1** to **2W4**), then press the Enter button. A menu of available types will display.
3. Scroll to select **AudioCom**, then press Enter.
4. Verify that the IN level for the port is **-6**.
5. Verify that the OUT level for the port is **+4**.
6. Repeat steps 1–5 for each 2-Wire port of all connected Control Units.

NOTE: 4-Wire ports are not used in standard X-System operation and should be turned off.

To turn ports OFF: Select **OFF** as the port type.

Wired Settings > Intercom Settings							
DEVICE	PORT	TYPE		MK	ECAN	IN	OUT
XCU441	2w1:	A-C	OFF	OFF	ON	-6 <input type="text"/>	<input type="text"/> +4
	2w2:	A-C	RTS Ch1	OFF	ON	-6 <input type="text"/>	<input type="text"/> +4
	2w3:	A-C	RTS Ch2	OFF	ON	-6 <input type="text"/>	<input type="text"/> +4
	2w4:	A-C	AudioCom	OFF	ON	-6 <input type="text"/>	<input type="text"/> +4
			ClearCom	OFF	ON	-6 <input type="text"/>	<input type="text"/> +4

Figure 5: Control Unit Intercom Settings Menu

Covering Your RTs

When using your Radio Transceivers (RTs) in a wet environment, protect them with a protective enclosure that will not interfere with the RF (for example, a clear plastic bag). CoachComm recommends either covering each RT individually with small bags or covering the whole RT bracket with a large bag. The X-System Radio Transceivers are weather-resistant, including gaskets intended to prevent moisture entry from the top and sides. The Cat 5e cable connection on the bottom is not water tight.

Note: For optimal performance, do your best to maintain proper orientation of 90 degrees across the field when covering RTs.