

Digi-Wave™ Dock Application Guide

SYSTEM EXAMPLES



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Purpose of this Guide

The Digi-Wave Dock provides a way to:

- (a) **connect** Digi-Wave wireless product to a **hard-wired system**,
- (b) hard-wire wireless product together, and
- (c) **charge** Digi-Wave DLTs and/or DLRs

This guide is designed to present various ways the Digi-Wave Dock can be utilized. The dock is a versatile piece of equipment, and the following examples are by no means exhaustive. These examples are provided as a starting point for more creative or complex uses.

“**DLT**” in this guide refers to DLT 300 or DLT 100 2.0.

“**DLR**” in this guide refers to DLR 60, DLR 60 2.0 or DLR 360.

Note: The DLT 100 and DLR 50 units do not have active audio pins to send or receive audio through the 30-pin connector on the Dock. So these units cannot be used in any of the scenarios described in this guide. The DLT 100 can be charged in the dock (only).

Cannot be used in ***any*** scenarios this guide:

DLT 100
DLR 50

Can be used in applicable scenarios in this guide:

DLT 300
DLT 100 2.0
DLR 360
DLR 60 2.0
DLR 60

Base Station Transmitter

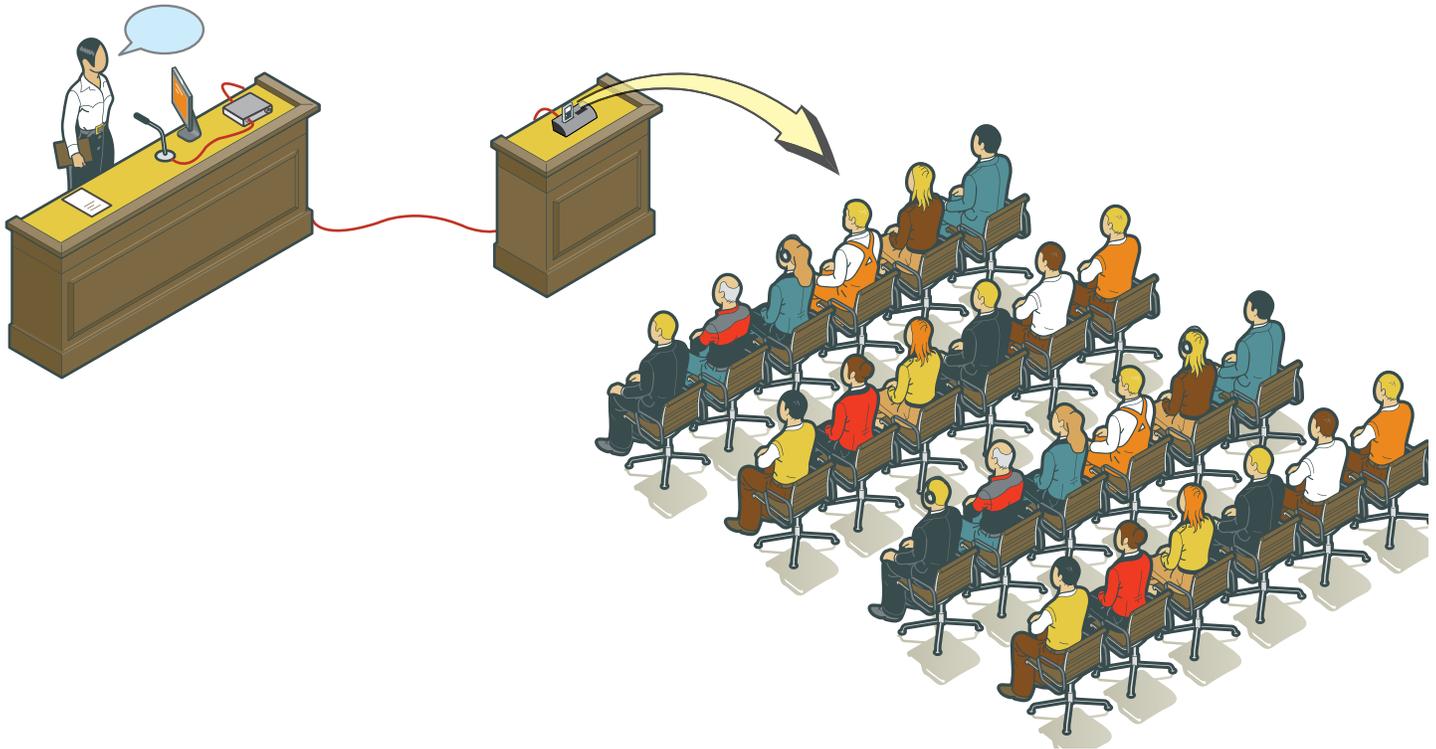
The Digi-Wave Dock can be used as a method of transmitting audio from a sound system to the audience listening with transceivers or receivers.

How it works:

An audio program, presenter's voice, etc. is sent from a sound system or other equipment to the dock line input. The dock delivers the audio to the docked transceiver which broadcasts the audio out to receivers (or transceivers) in the audience.

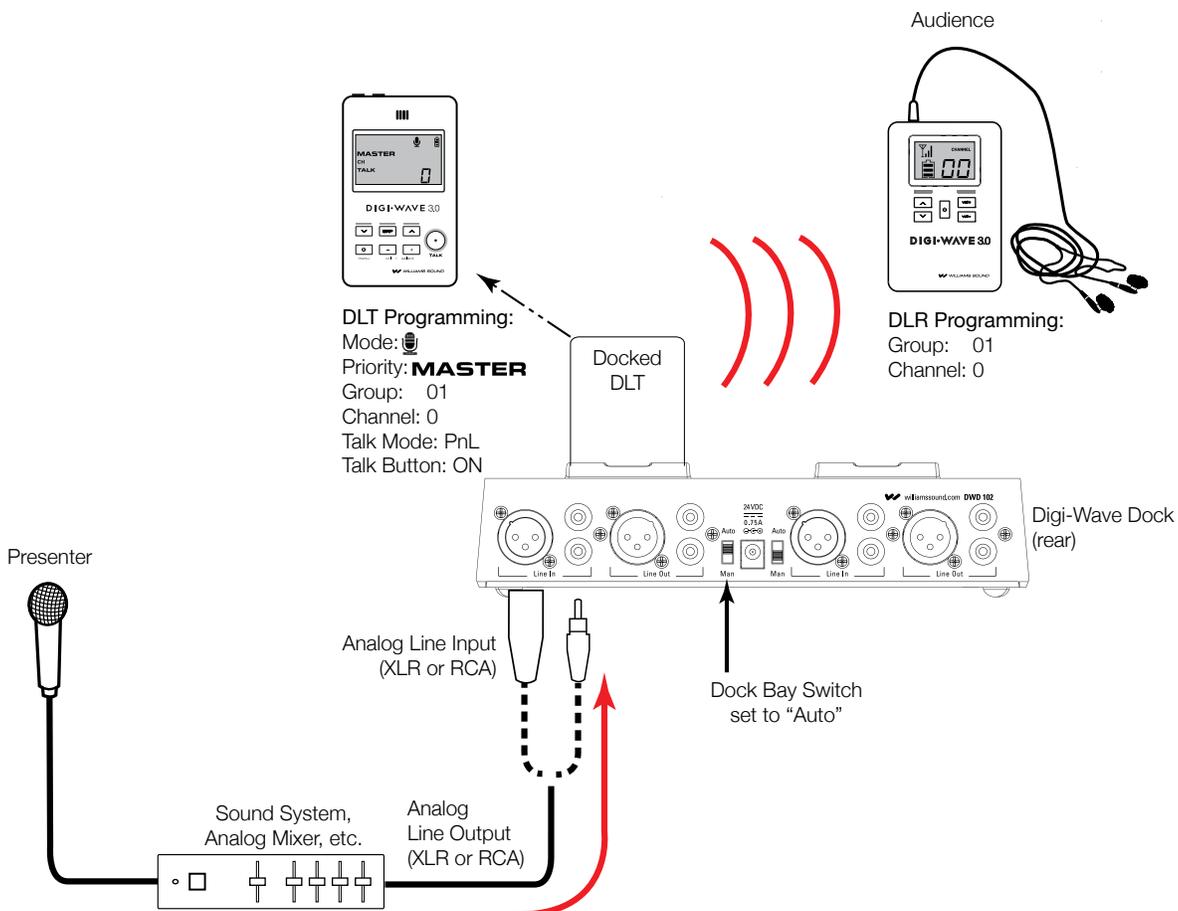
Required Equipment:

One Digi-Wave Dock, one DLT 300 Transceiver



Unit Programming for Base Station Transmitter					
Unit Location	Model	Mode	Priority	Group	Channel
Docked *	DLT 300	1-way - Main Speaker: 	Master MASTER	01	0
Audience	DLR 360	-	-	01	0

* Docked DLT must have its bay switch set to "Auto". This keeps the battery charged and locks the TALK button on. When the Dock gets powered up the DLT will begin transmitting automatically. When listeners enter the room, their receivers (or transceivers) will sync to the docked unit and begin receiving audio.



Base Station Receiver

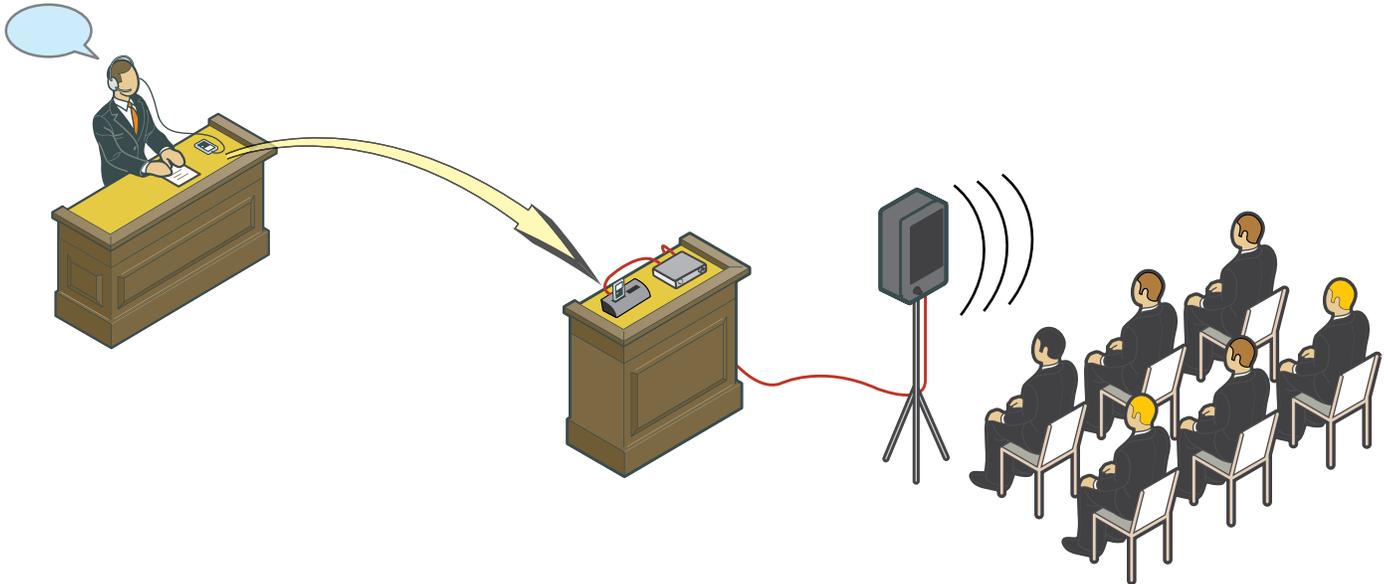
The Digi-Wave Dock can be used to receive audio from a DLT, and send this audio into a sound system. Utilized in this way, a presenter can be recorded, heard by the audience using receivers, or heard by the audience through loudspeakers.

How it works:

A presenter's voice is transmitted from a DLT 300 transceiver to a docked DLR 360 receiver. The dock sends the audio through its line outputs into a sound system or other equipment.

Required Equipment:

One Digi-Wave Dock, one DLR 360 Receiver

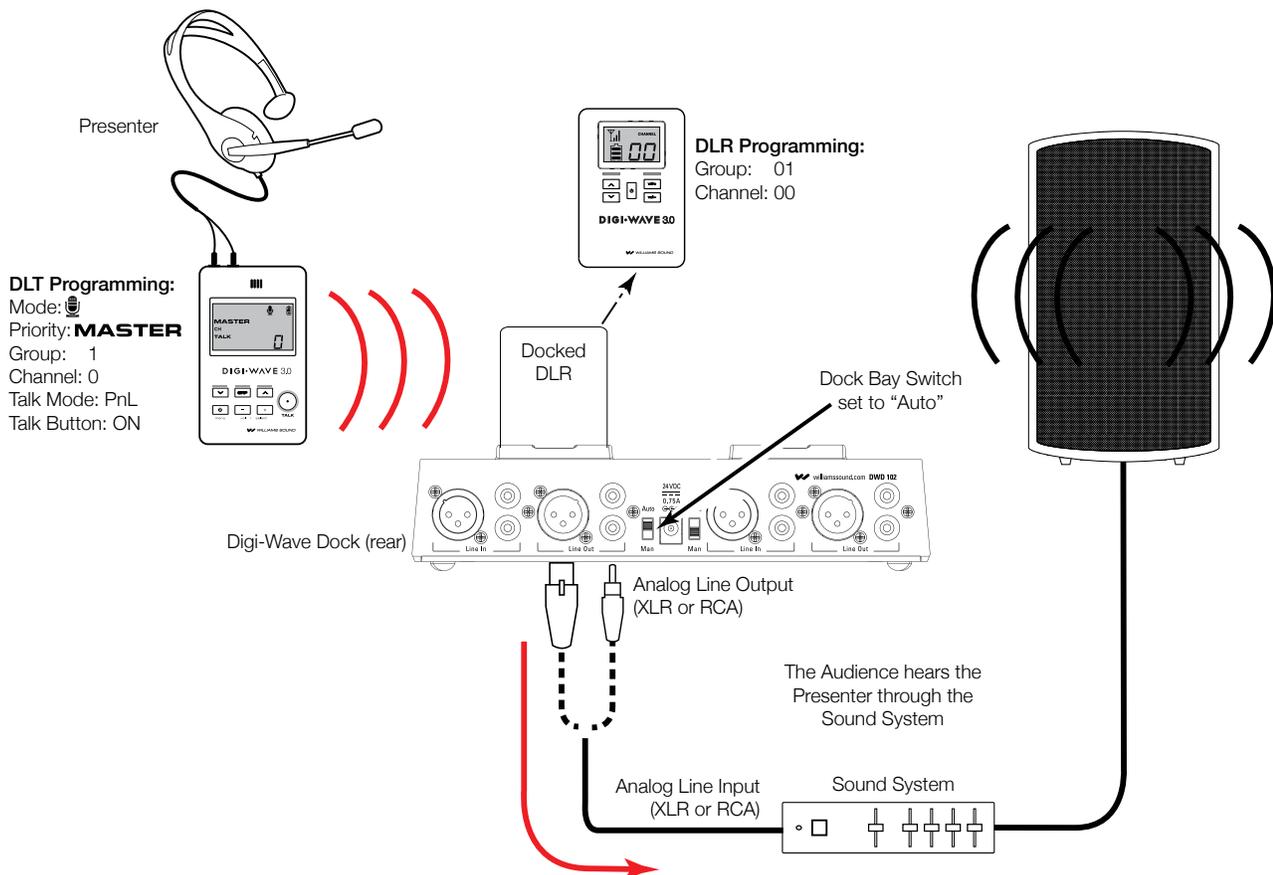


Base Station Receiver Unit Programming					
Unit Location	Model	Mode	Priority	Group	Channel
Presenter	DLT 300	1-way - Main Speaker: 	Master MASTER	01	0
Docked *	DLR 360	-	-	01	0

*The docked DLR should have its bay switch set to “Auto”; this keeps it powered up and it will begin receiving when the dock powers up and the Master is found.

The presenter’s DLT should be set to 1-way mode-Main Speaker/Master; this way when the presenter enters the room, the docked receiver (or transceiver) will sync with the presenter’s DLT and begin receiving the audio, automatically.

Using a docked receiver is recommended for simplicity, but if using a docked DLT, it should be set to 2-way Slave mode. This will not work if the docked DLT is in one-way mode.



Teleconferencing

The dock provides full duplex audio capability when a DLT Transceiver is docked. Utilized in this way, two-way communication can be established between two conference rooms, with audio sent/received over the internet. People on both sides can speak/listen with DLT transceivers, or just listen with DLR receivers. A program such as Skype or other teleconference software can be used to make the conference call over the internet. The two-way audio from each dock is connected to the computer in that conference room, and the audio from the dock is routed into a sound system in that room. Additional DLTs can be added for hearing assistance, asking and answering questions, or for presentations where a person will be standing or walking.

How it works:

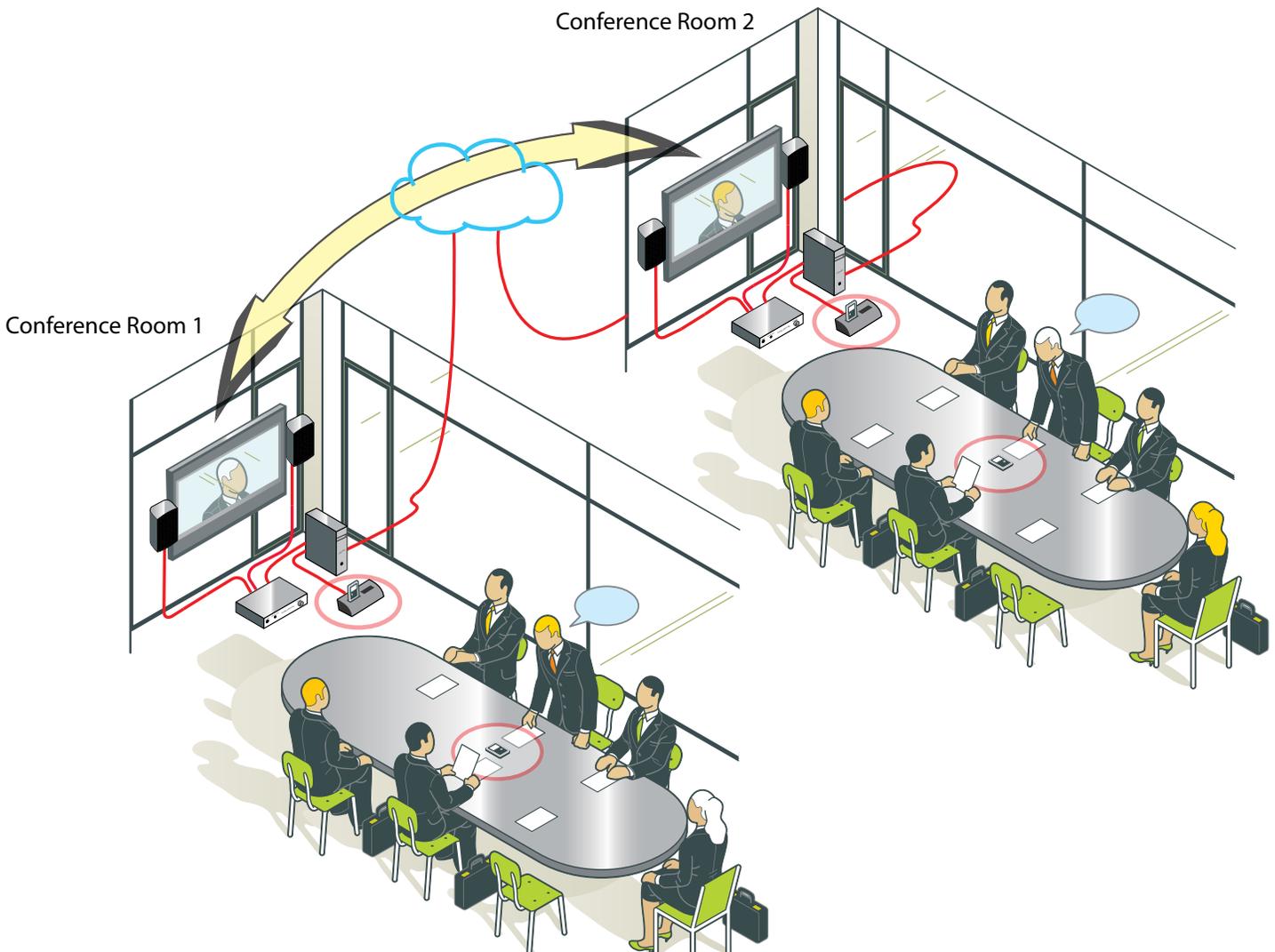
In Conference Room 1, people's voices are picked up using the internal microphone* on a portable DLT on the conference room table. This audio is transmitted to a docked DLT. The dock sends the audio through its outputs to a computer. The computer sends the audio through the internet where it is received by a computer in Conference Room 2. The computer in Conference Room 2 sends its audio to a sound system for people in Conference Room 2 to hear. Additional DLTs can be used for hearing assistance or Q&A.

In the same manner, audio is sent from Conference Room 2 to Conference Room 1. Typically this type of system is coupled with a video screen in each conference room, so the people in both locations can see each other.

*a conference microphone could also be used for improved pickup of multiple voices (not shown)

Required Equipment:

Two Digi-Wave Docks, four DLTs, four 3.5mm to RCA cables, conference microphone if desired

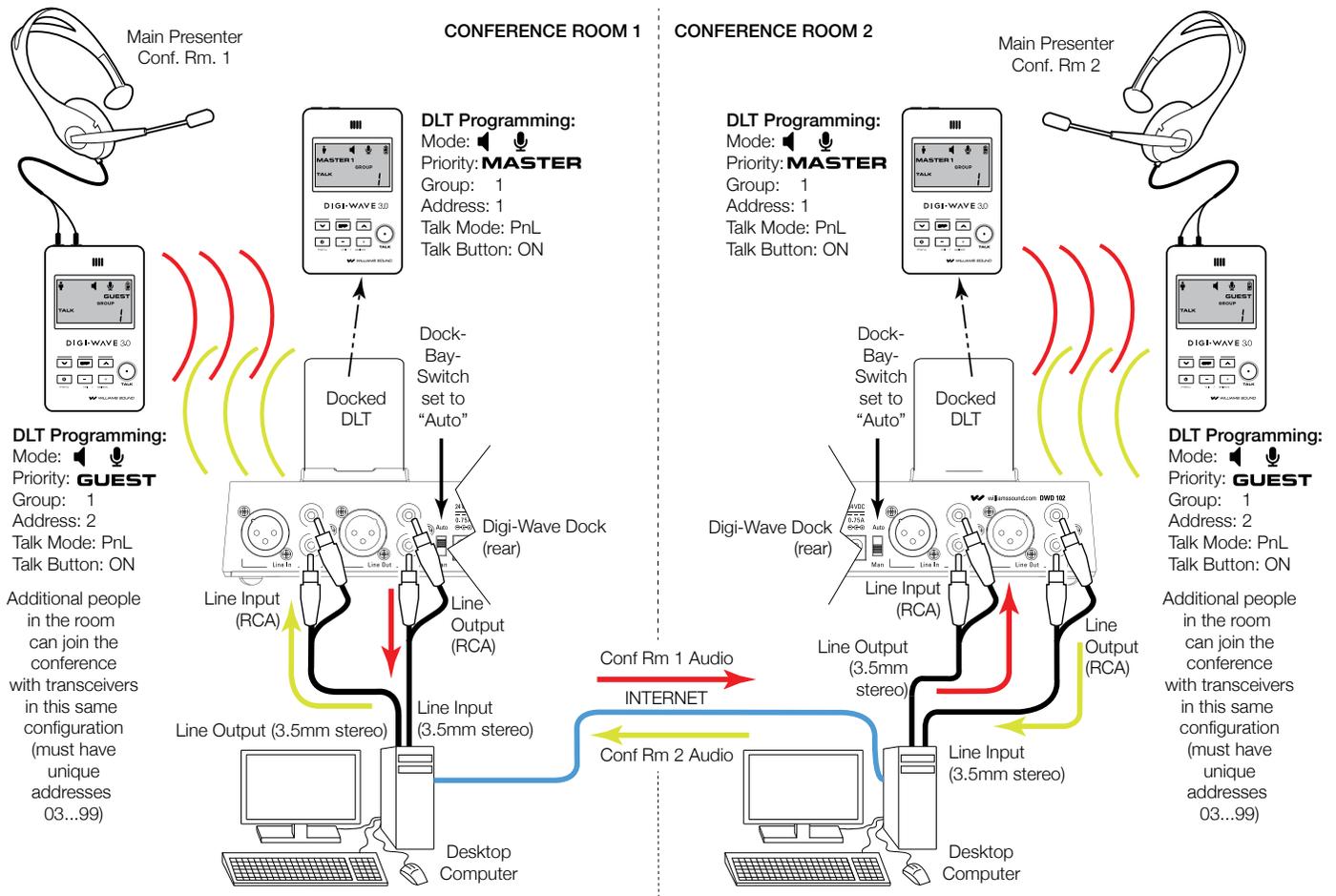


Teleconferencing Unit Programming					
Unit Location	Model	Mode	Priority	Group	Address
Docked * Conf Rm 1	DLT 300	2-way:	Master 1 MASTER 1	1	01
Presenters Conf Rm 1	DLT 300	2-way:	Guest GUEST	1	02 ... 99**
Docked * Conf Rm 2	DLT 300	2-way:	Master 1 MASTER 1	1	01
Presenters Conf Rm 2	DLT 300	2-way:	Guest GUEST	1	02 ... 99**

* Docked DLT must have its bay switch set to "Auto". This keeps the battery charged and locks the TALK button on. When the Dock gets powered up the DLT will begin transmitting automatically. When listeners enter the room, their receivers (or transceivers) will sync to the docked unit and begin receiving audio.

** Each DLT transceiver within a Group must have a unique address.

Conference Room 1 and 2 are separated by a large enough physical distance that both rooms are out of range of each other's Digi-Wave System. This eliminates the need to have each system on separate groups, so they can both use Group 1.



Range Extender

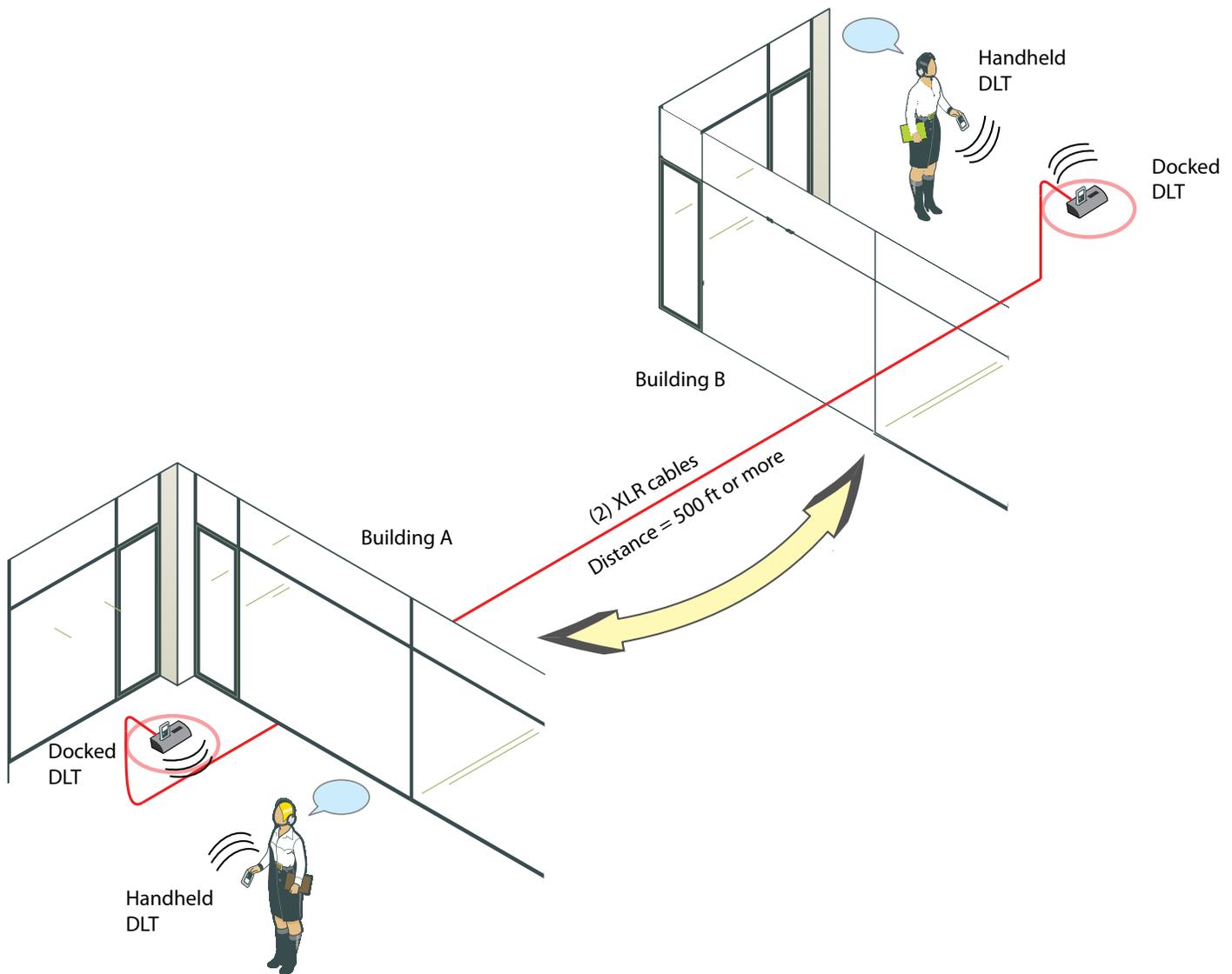
The Digi-Wave Dock can be used to extend the range of an existing Digi-wave System - for reaching a larger audience, reaching audiences in additional rooms or areas, or for establishing two-way communication that is outside the normal range of wireless operation (shown).

How it works:

In Building A, a talker's voice is transmitted from a handheld DLT to a docked DLT. The dock sends the received audio through its output, through the first XLR cable, to the input of a second dock in Building B. The second dock has a DLT transceiver that broadcasts the audio to a person listening with a handheld DLT. When the person in Building B speaks, audio travels from the handheld DLT, to the docked DLT, and back along a second XLR cable to Building A where it enters the first dock's input, completing a two-way communication path. The length of the range extension is limited by the type of XLR cables used, but can be as much as 500 feet or even much more.

Required Equipment:

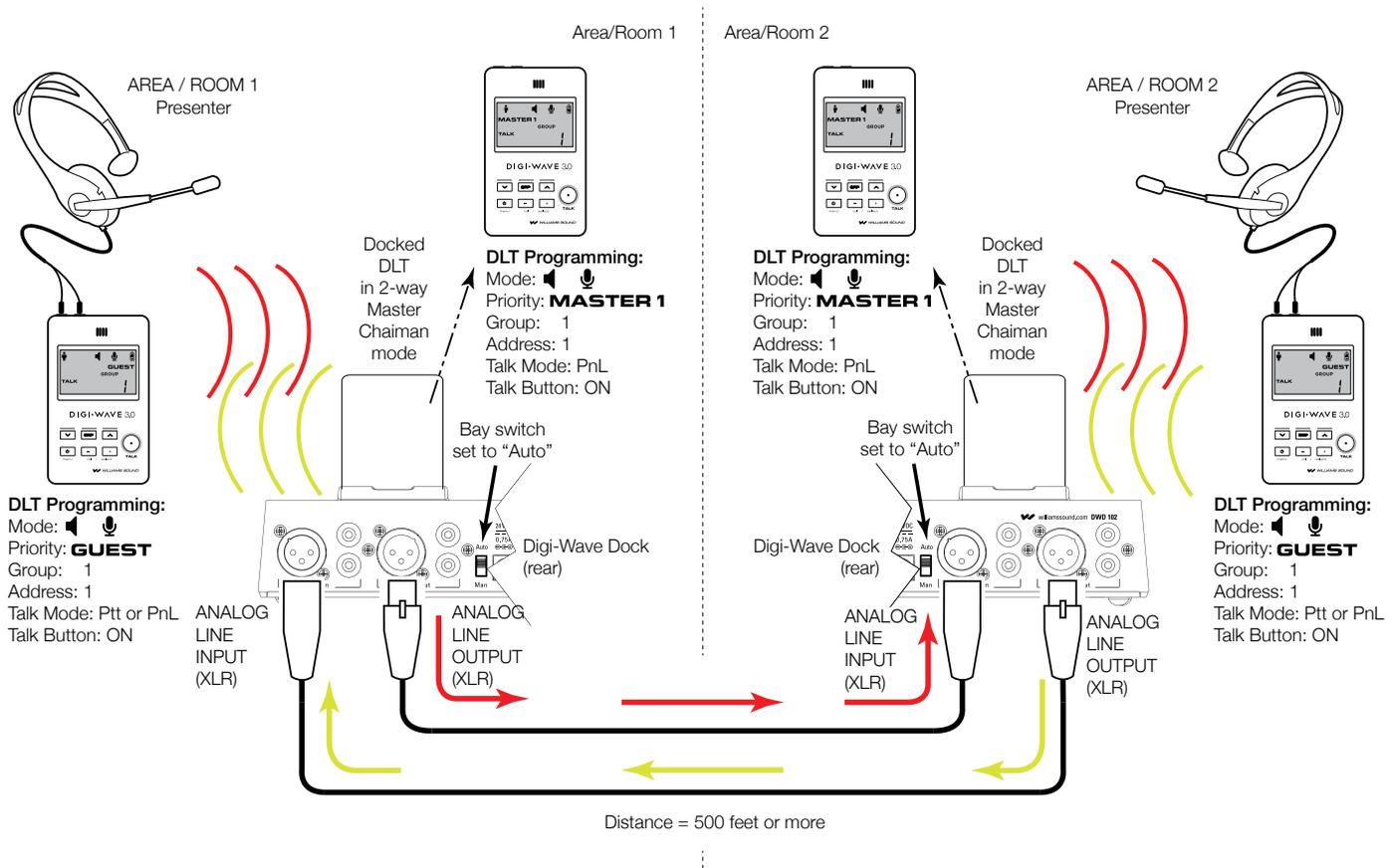
Two Digi-Wave docks, two long XLR cables, and 4 DLT Transceivers



Range Extender Unit Programming					
Unit Location	Model	Mode	Priority	Group	Address
Docked * Area/Rm 1	DLT 300	2-way:  	Master 1 MASTER 1	1	01
Presenter Area/Rm 1	DLT 300	2-way:  	Guest GUEST	1	02 ... 99*
Docked * Area/Rm 2	DLT 300	2-way:  	Master 1 MASTER 1	1	01
Presenter Area/Rm 2	DLT 300	2-way:  	Guest GUEST	1	02 ... 99*

* Docked DLT must have its bay switch set to "Auto". This keeps the battery charged and locks the TALK button on. When the Dock gets powered up the DLT will begin transmitting automatically. When listeners enter the room, their receivers (or transceivers) will sync to the docked unit and begin receiving audio.

** Each unit within a Group must have a unique address.



Interpretation with Wireless Presenter

The Digi-Wave Dock can be used to easily connect an IC-2 Interpreter's console and provide a wireless transceiver for the main presenter (floor). The audience hears the interpreted language (from the IC-2 console) on Channel 1, or the original presenter on Channel 0.

How it works:

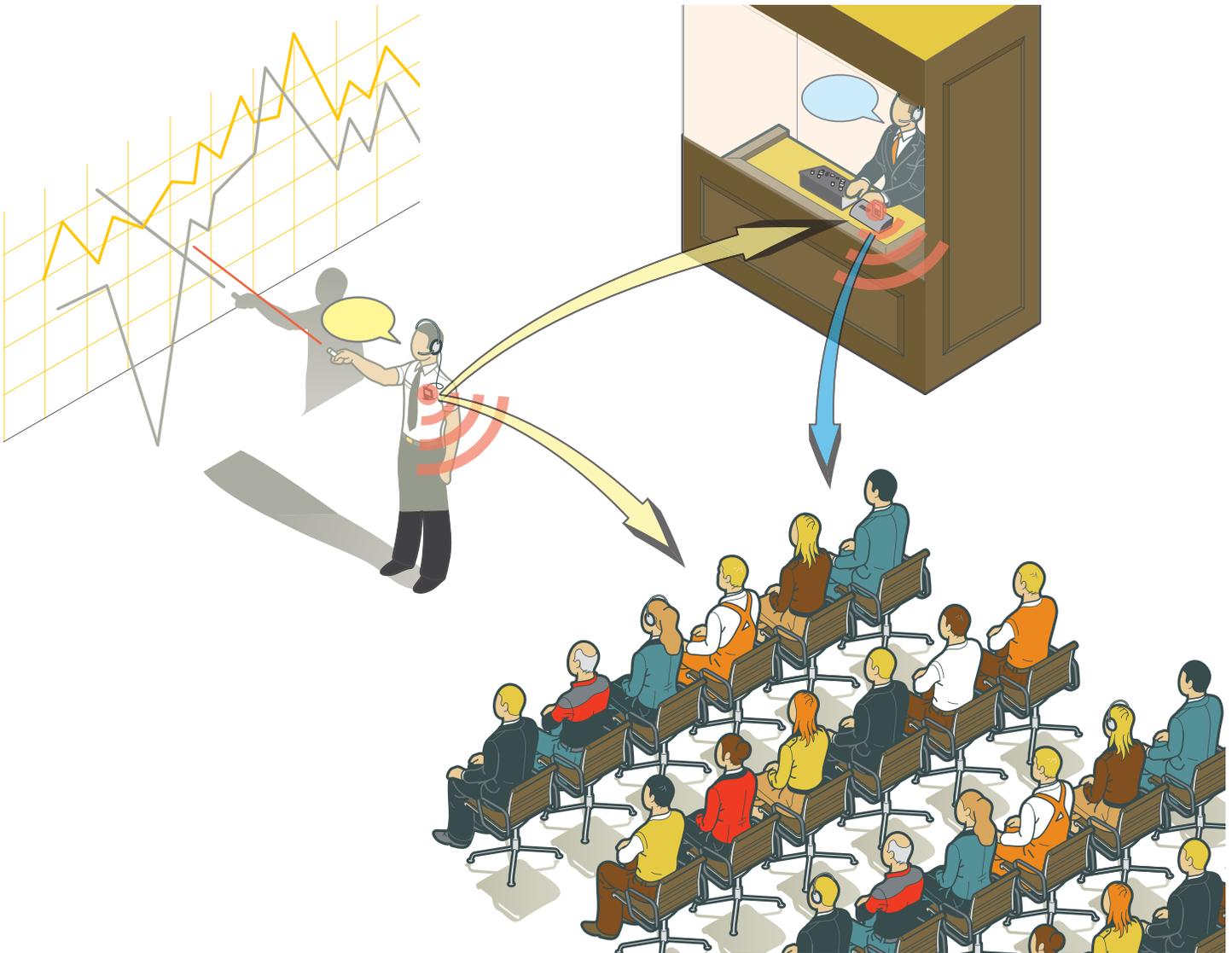
The main presenter's voice (i.e. English) is transmitted from a portable DLT in 1-way mode on Ch. 0, to a docked DLT in Interpreter Mode on Ch. 1. The dock sends the presenter's voice through an XLR cable to the Floor input on the IC-2. The interpreter hears the presenter's voice and interprets into Spanish. Spanish comes back from the IC-2 to the Dock on an XLR cable. The docked DLT broadcasts the interpreter's voice to the audience listening with DLR receivers on Channel 1.

Additional languages (Channels 2-14) require daisy-chaining additional IC-2's and additional Dock Bays, one for each interpreted language. In this example just the first interpreted language/IC-2/dock is shown.

Note that this "Floor-In" method need only be connected on the first IC-2 when daisy-chaining a system, as the floor will be carried on the bus to each IC-2 in the chain.

Required Equipment:

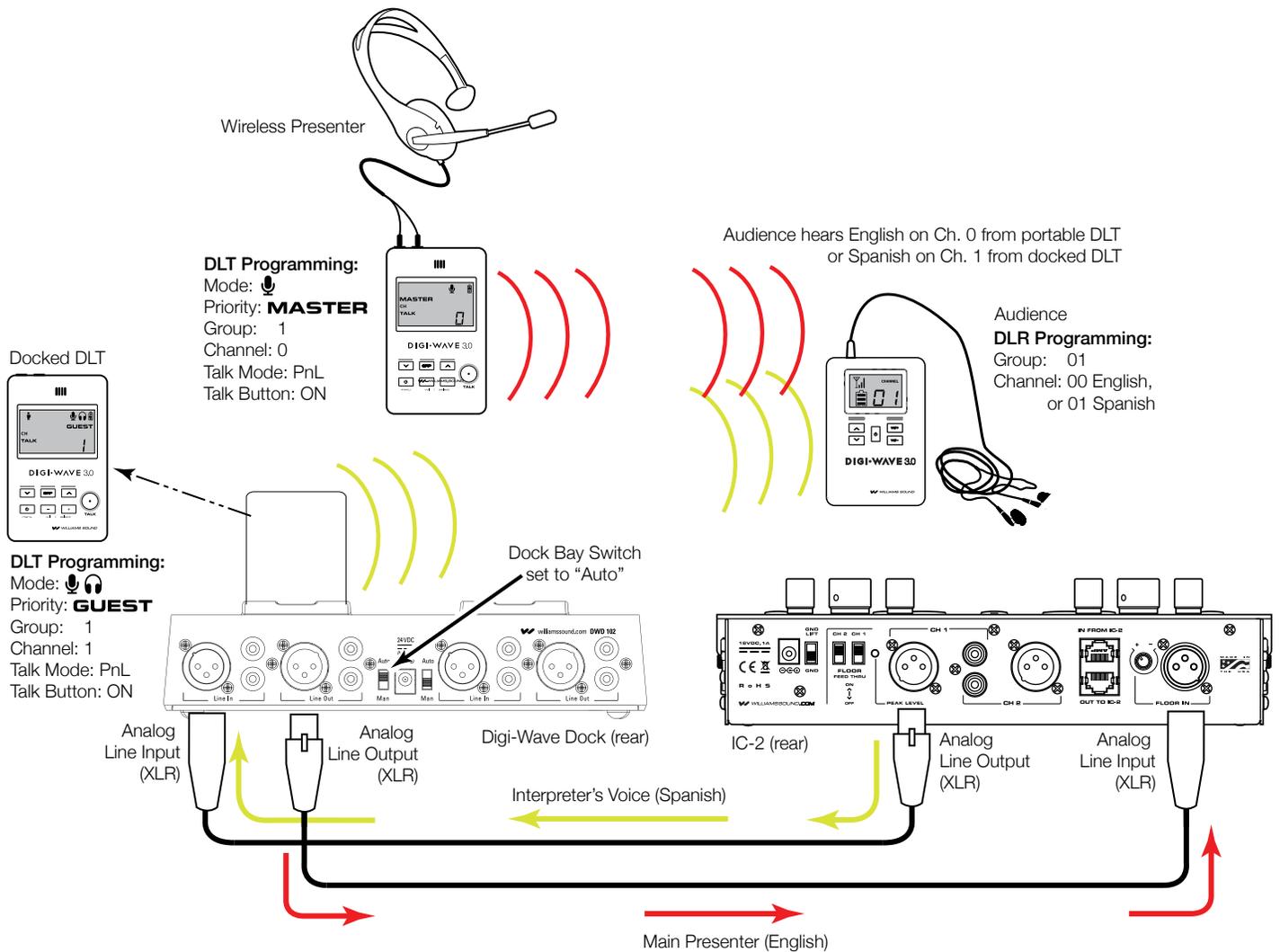
One Digi-Wave dock, one IC-2 Interpreters Console, 2 DLT Transceivers, 2 XLR cables, audience DLRs as required.



Interpretation with Wireless Presenter Unit Programming					
Unit Location	Model	Mode	Priority	Group	Channel
Docked *	DLT 300	1-way - Interpreter:  	Guest GUEST	1	0
Wireless Presenter Ch. 0	DLT 300	1-way - Main Speaker: 	Master MASTER	1	1
Audience Members	DLR 360	-	-	1	0-14

* Docked DLT must have its bay switch set to "Auto". This keeps the battery charged and locks the TALK button on. When the Dock gets powered up the DLT will begin transmitting automatically. When listeners enter the room, their receivers (or transceivers) will sync to the docked unit and begin receiving audio.

The Audience listens to the Floor or interpreted channels. Docked unit is Ch. 1-14, one channel per language.



Two-Way, Two-Language Question and Answer

This solution can be used for two groups who speak different languages and need a back-and-forth dialogue. A single interpreter alternates between languages, first interpreting English to Spanish, then interpreting Spanish to English, and so on. The Digi-Wave Dock can be used to easily connect an IC-2 Interpreter's console for this setup. In this example the audience can ask questions and hear the answers in their language (English on Group 1, or Spanish on Group 2).

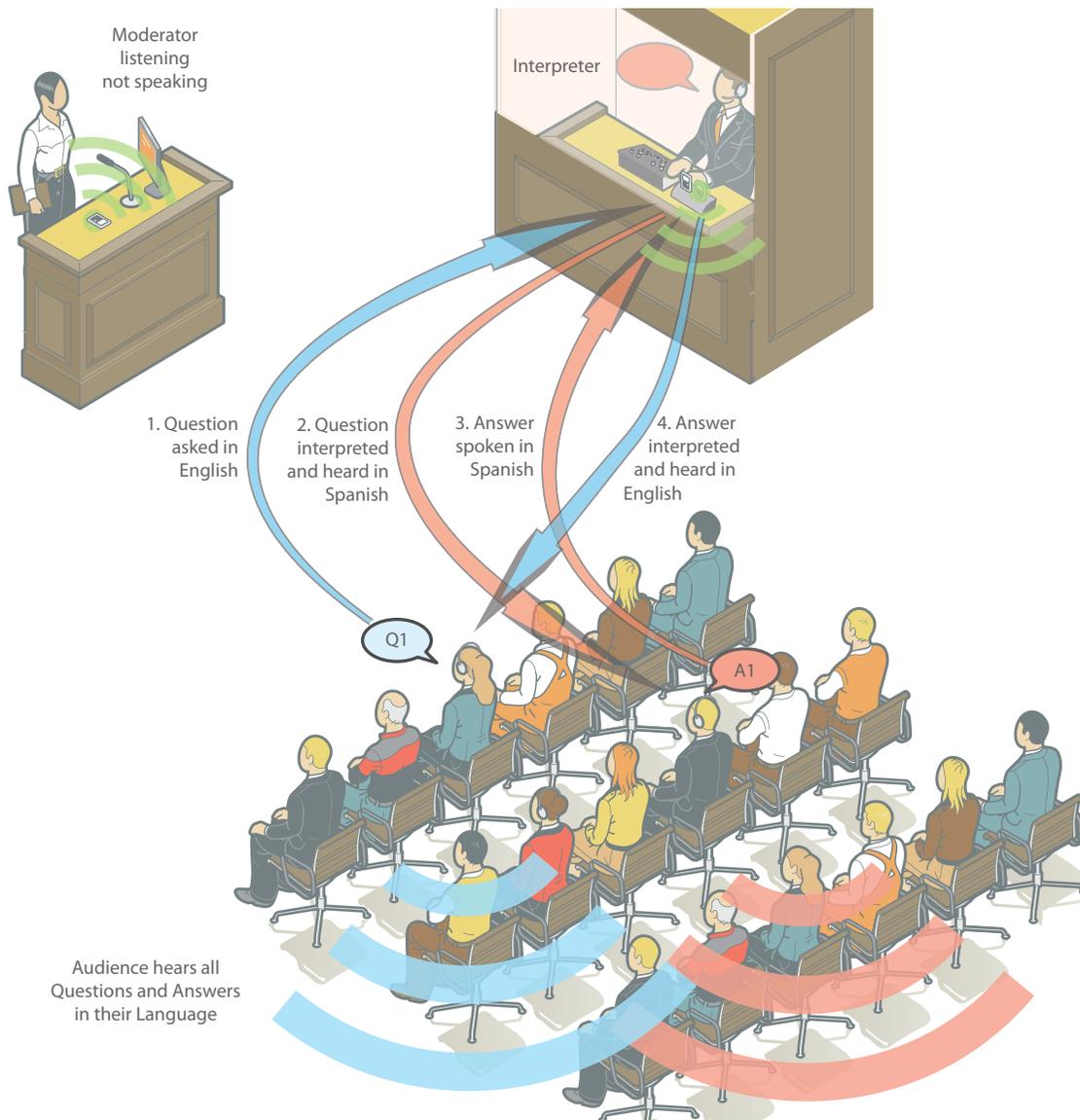
How it works:

By using the Ch. 2 Out and Relay-In on the IC-2, the Interpreter hears Group 1 (English) while interpreting to Group 2 (Spanish). If a question is asked in Spanish, the interpreter switches to "Relay-In/Ch 2 Out OFF" mode to hear the question in Spanish and interprets Spanish back to English. English travels back from the IC-2 in the opposite direction.

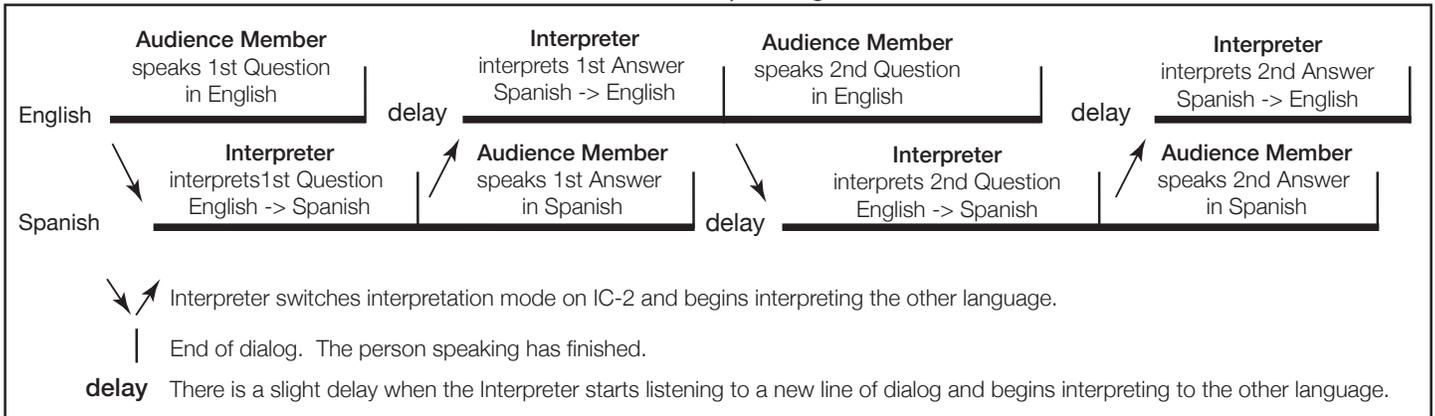
Audience members choose the Group for whichever language they want (Group 1 for English, or Group 2 for Spanish). The Audience stays in their Group (they don't need to change Groups), and they can ask questions, make statements, and hear questions and answers/ statements in their language. When anyone in either group asks a question, the audience members hear it in their language, and they also hear the answer in their language.

Required Equipment:

One Digi-Wave dock, One IC-2 Interpreter's Console, two DLTs, 3 XLR cables, one XLR-RJ45 IC-2 cable, audience DLTs/DLRs as required.



Order of speaking:

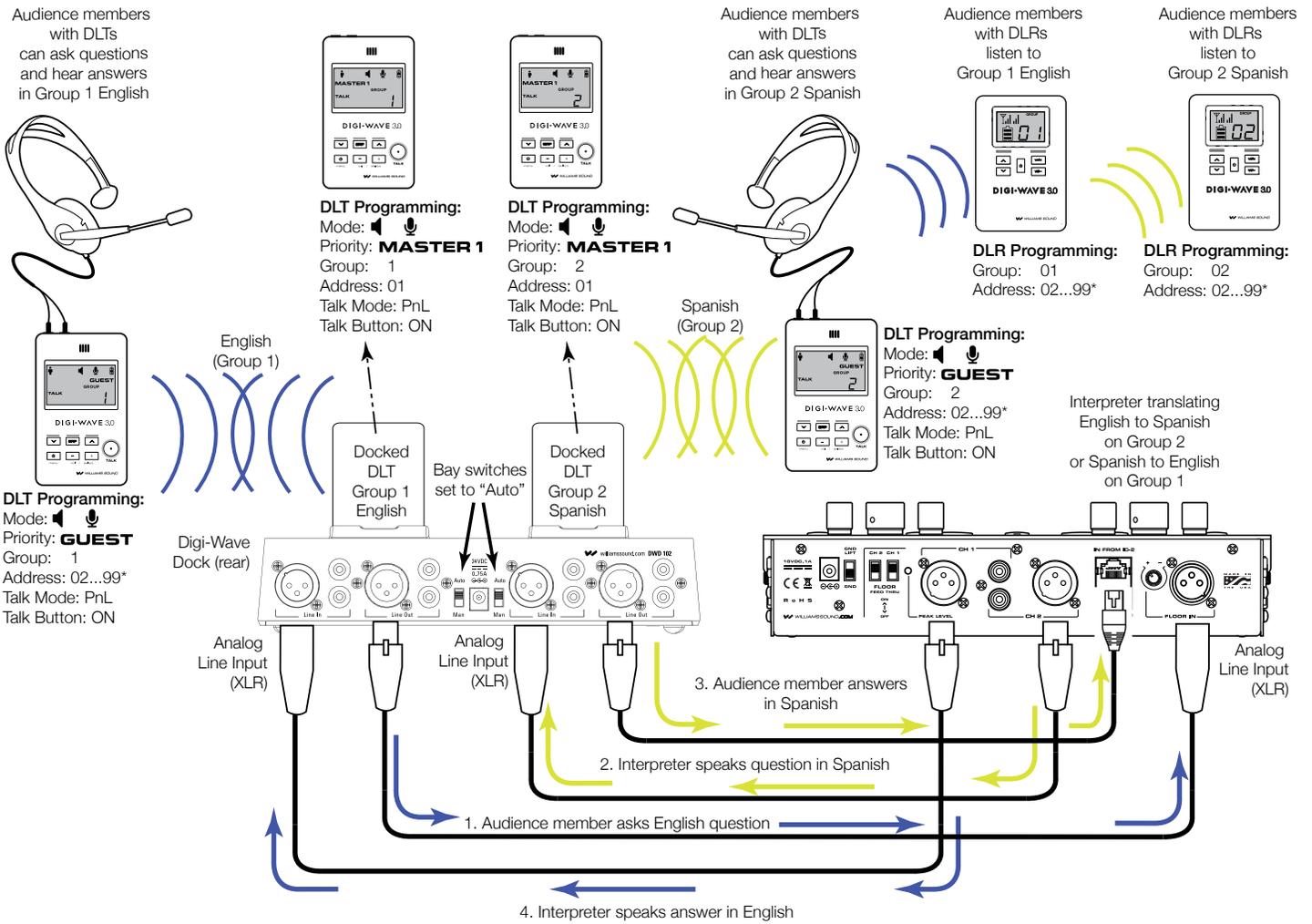


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Two-Way, Two-Language Question and Answer Unit Programming					
Unit Location	Model	Mode	Priority	Group	Address
Dock 1 Bay 1 * (English)	DLT 300	2-way  	Master 1 MASTER 1	1	01
Dock 1 Bay 2 * (Spanish)	DLT 300	2-way  	Master 1 MASTER 1	2	01
Spanish Audience Ch. 1	DLT 300 presenter DLR 360 listeners	2-way   -	Guest GUEST -	2	02 ... 99 **
English Audience Ch. 2	DLT 300 presenter DLR 360 listeners	2-way   -	Guest GUEST -	1	02 ... 99 **

* Docked DLT must have its bay switch set to "Auto". This keeps the battery charged and locks the TALK button on. When the Dock gets powered up the DLT will begin transmitting automatically. When listeners enter the room, their receivers (or transceivers) will sync to the docked unit and begin receiving audio.

** Each unit within a Group must have a unique address.



Five Simultaneous Talkers with a 2.0 System

The 2.0 series Digi-Wave System is limited to two simultaneous talkers within the wireless system. Now the Digi-Wave Dock can be used to add three additional speakers for a total of five. This scenario is set up as one-way communication from the presenters to the audience.

In this example, a city council meeting has five council members that need to speak at any given time. The audience needs to hear all five council members. Since all council members are sitting at the same table, they can hear each other speak, and do not require two-way communication with each other. The system example here allows the audience to hear all five council members.

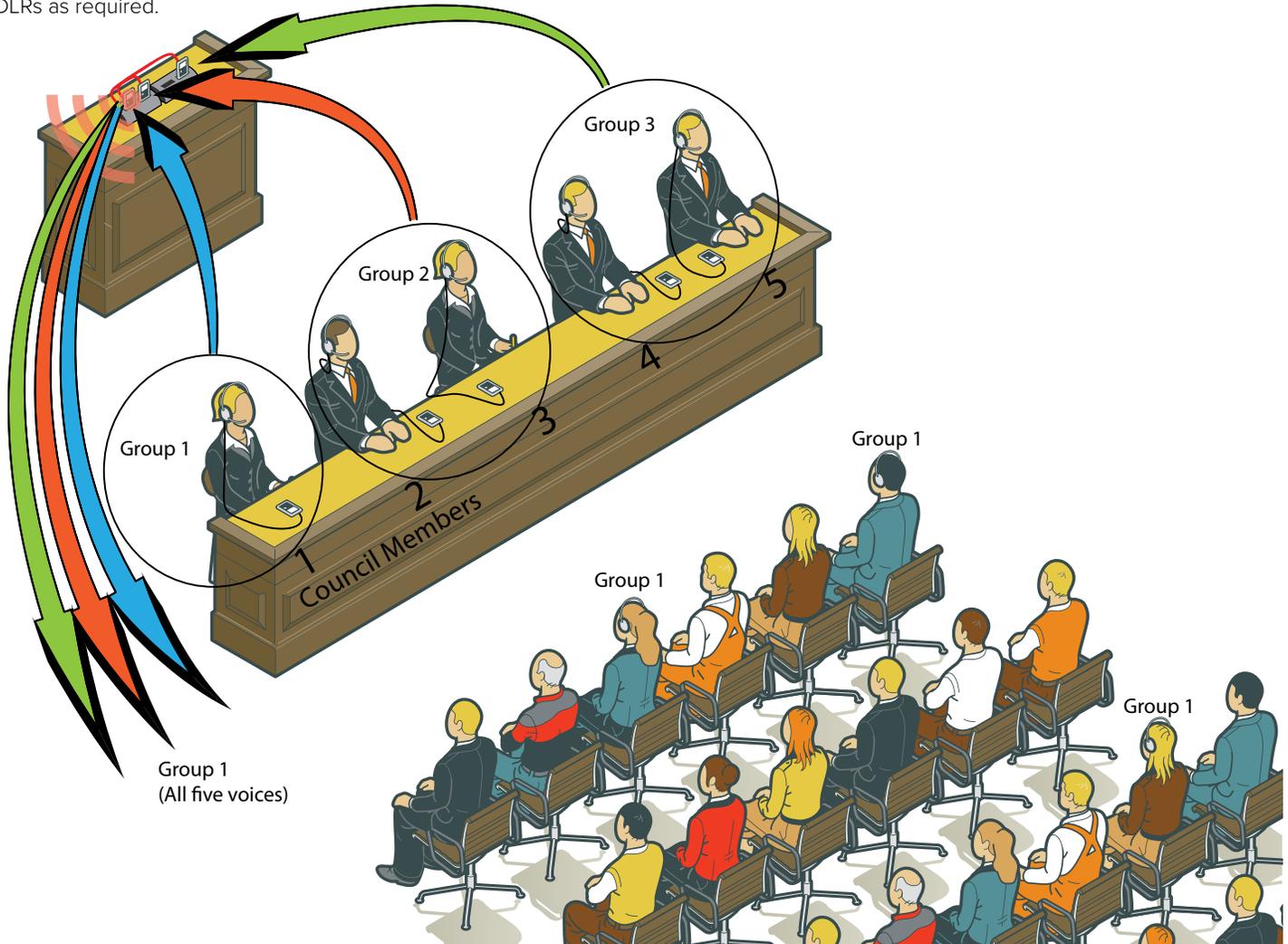
Note that many other configurations are possible to allow a free-floating transceiver for audience questions/comments - and in that case this would have to be set up as a two-way communication system, with transceivers in the dock. A wireless microphone system could be mixed into the dock if a wireless microphone system is available.

How it works:

This example takes advantage of the dock's ability to mix input signals. By combining inputs at the first dock, the voices of Council Members 2 & 3 (Group 2) are combined with the voices of Council Members 4 & 5 (Group 3), then combined with the voice of Council Member 5 (Group 1). The combined audio from all groups is transmitted out to the audience on Group 1.

Required Equipment:

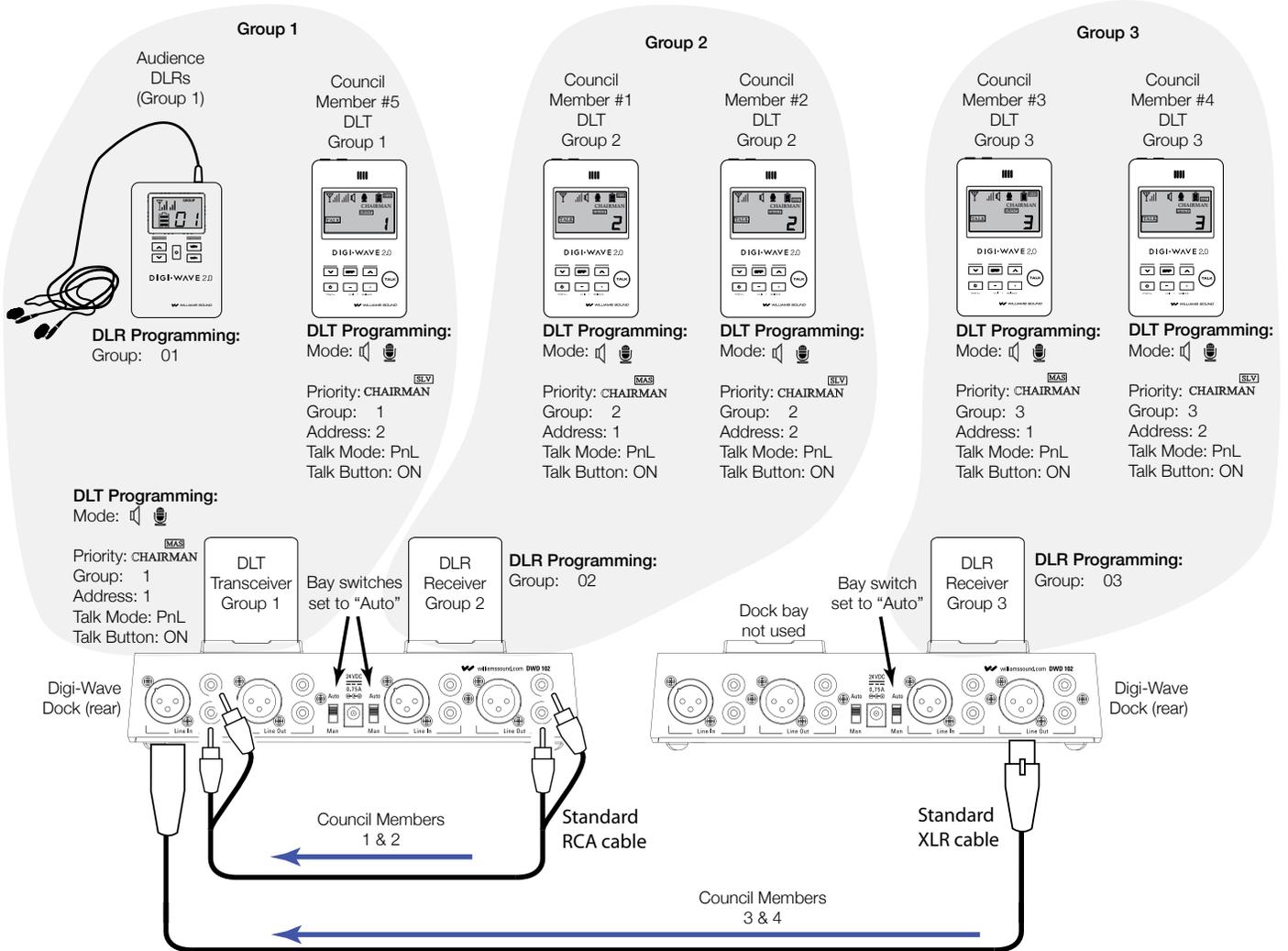
Two Digi-Wave docks, six DLTs (1 docked, 5 for talkers), two DLRs (both docked), one stereo RCA cable, one XLR cable, audience DLTs/DLRs as required.



Five Simultaneous Talkers with a 2.0 System Unit Programming					
Unit Location	Model	Mode	Priority	Group	Address
Dock 1 Bay 1 *	DLT 100 2.0	2-way  	^{MAS} Chairman Master CHAIRMAN	1	01**
Dock 1 Bay 2 *	DLR 60 2.0	-	-	2	-
Dock 2 Bay 1 *	DLR 60 2.0	-	-	3	-
Council Member 5	DLT 100 2.0	2-way  	^{SLV} Chairman Slave CHAIRMAN	1	02 **
Council Member 1	DLT 100 2.0	2-way  	^{MAS} Chairman Master CHAIRMAN	2	01 **
Council Member 2	DLT 100 2.0	2-way  	^{SLV} Chairman Slave CHAIRMAN	2	02 **
Council Member 3	DLT 100 2.0	2-way  	^{MAS} Chairman Master CHAIRMAN	3	01 **
Council Member 4	DLT 100 2.0	2-way  	^{SLV} Chairman Slave CHAIRMAN	3	02 **
Audience	DLR 60 2.0	-	-	1	-

* Docked DLT must have it's bay switch set to "Auto". This keeps the battery charged and locks the TALK button on. When the Dock gets powered up the DLT will begin transmitting automatically. When listeners enter the room, their receivers (or transceivers) will sync to the docked unit and begin receiving audio. Docked DLRs should also have the bay switch set to "Auto"; this keeps them powered up and they begin receiving when the dock powers up and the Master is found.

** Each unit in a Group must have a unique address.



Extending a 2.0 Series system with 300 Series Product

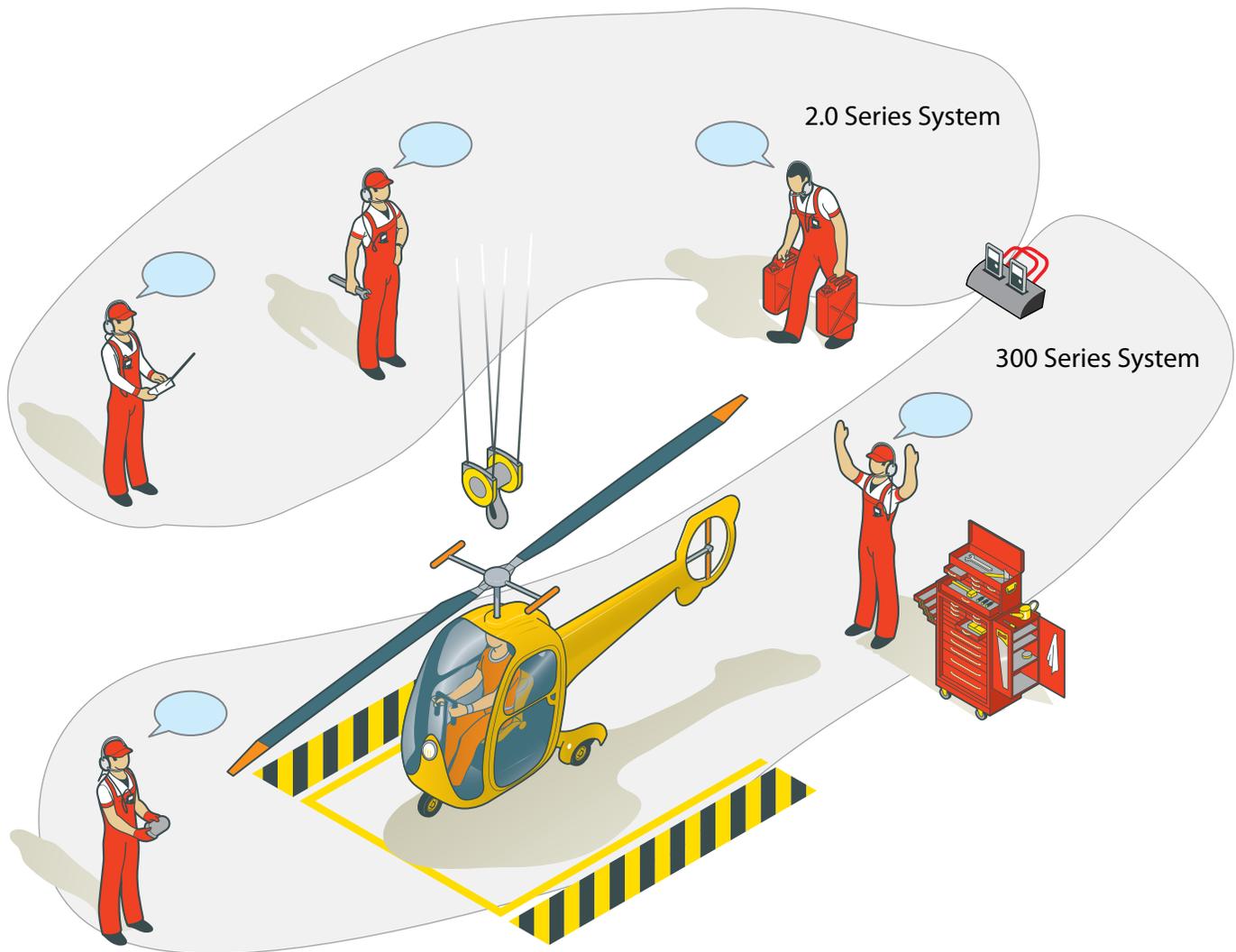
The 2.0 series systems are not directly compatible with the newer 300 Series systems. However, by using the Digi-Wave Dock, these systems can now be used together. The dock can also be used to *extend the range* of a 2.0 system by adding 300 Series product.

How it works:

A DLT 100 2.0 is inserted into one bay, and a DLT 300 is inserted in the second bay. The bays are tied together with standard XLR cables, routing the outputs of each bay to the inputs of the other bay. By doing this, two-way communication is established. The DLTs are set to 2-way mode. Audio level adjustments will need to be made to balance voices.

Required Equipment:

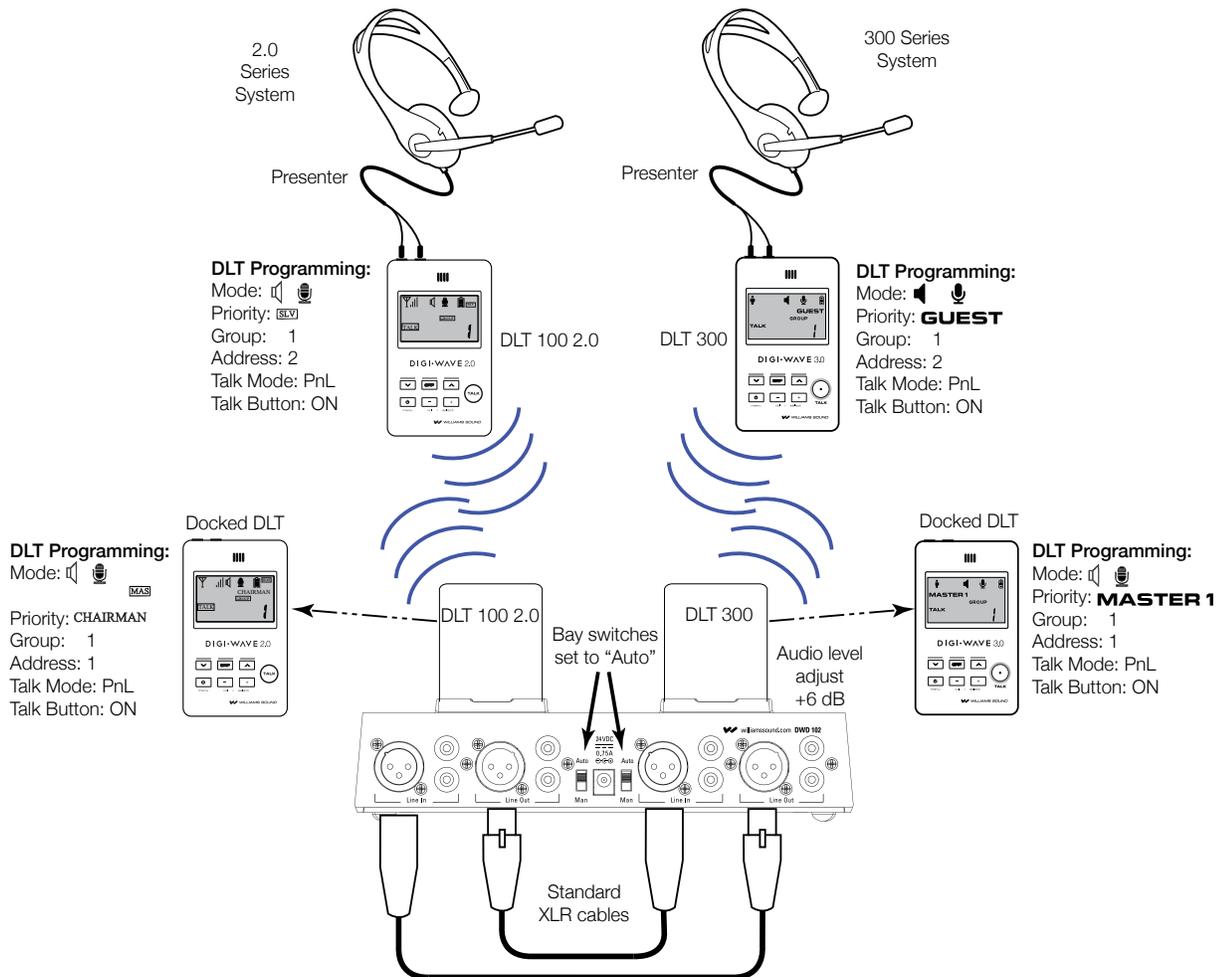
One Digi-Wave dock, one DLT 100 2.0, one DLT 300, two XLR cables, and talker DLTs per system as required (in this example, three DLT 300's and two DLT 100 2.0's).



Extending a 2.0 System with 300 Series Product Unit Programming					
Unit Location	Model	Mode	Priority	Group	Address
Dock Bay 1 *	DLT 100 2.0	2-way  	Chairman Master CHAIRMAN ^{MAS}	1 **	01 **
Presenters (2.0 Series)	DLT 100 2.0	2-way  	Chairman Slave CHAIRMAN ^{SLV}	1 **	02...99 **
Dock Bay 2 *	DLT 300	2-way:  	Master 1 MASTER 1	1 **	01 **
Presenters (300 Series)	DLT 300	2-way:  	Master 2 GUEST	1 **	02...99 **

* Docked DLT must have its bay switch set to "Auto". This keeps the battery charged and locks the TALK button on. When the Dock gets powered up the DLT will begin transmitting automatically. When listeners enter the room, their receivers (or transceivers) will sync to the docked unit and begin receiving audio.

** Since the 2.0 and 300 Series platforms are incompatible, the same Group and Address can be used for the docked units without interference.





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Tel. +44 (0)1244 456 899

WILLIAMS AV

info@williamsav.com / www.williamsav.com
800-843-3544 / INTL: +1-952-943-2252