

VOKKERO GUARDIAN US Wireless Interface (WI) for GUARDIAN US

User Guide
Version 1.0.0



210858A

VOKKERO

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PRÉAMBULE / PREAMBLE

- Ce guide décrit les fonctionnalités du produit Vokkero® Guardian WI, ses options et ses accessoires. Il explique comment le configurer pour permettre une extension du système de conférence vers un réseau filaire.
- This guide describes the functionality of the Vokkero® Guardian WI product, options and accessories. It explains how to configure it to allow an extension of the conference system to a wired network.
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INFORMATIONS

Document Information	
Title	VOKKERO GUARDIAN US
Subtitle	Wireless Interface (WI)
Document type	User Guide
Version	Version 1.0.0

This document applies to the following products:

Nom	Référence
VOKKERO GUARDIAN US - Wireless Interface (WI)	Up to: V08161B

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TECHNICAL SUPPORT

Website

Our website contains a lot of useful information: information on modules and wireless modems, user guides, and configuration software and technical documents which can be accessed 24 hours a day.

If you have technical problems or cannot find the required information in the provided documents, contact our Technical Support on our website: www.vokkerousa.com. This ensures that your request will be processed as soon as possible.

Helpful Information when Contacting Technical Support

When contacting Technical Support, please have the following information ready:

- Product type (for example Guardian)
- Firmware version (for example V1.0)
- A clear description of your question or the problem
- A short description of the application

COMPLIANCE TO FCC US/CAN

- This device complies with part 15 of the FCC rules.

Operation is subject to the following two conditions:

- (1) this device may not cause Harmful interference, and
- (2) this device must accept any interference received, including interference that may cause undesired operation of the device.

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instruction, may cause harmful interference to radiocommunication. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off

and on, the user is encouraged to try to correct the interference by one or more of the following measures :

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.
- CHANGES OR MODIFICATIONS NOT EXPRESSLY APPROVED BY VOGO COULD VOID THE USER'S AUTHORITY TO OPERATE THE EQUIPMENT.

This device complies with license-exempt transmitter(s)/receiver(s) that comply with Innovation, Science and Economic Development Canada's licence-exempt RSS standard(s).

Operation is subject to the following two conditions:

- (1) this device may not cause harmful interference, and
- (2) this device must accept any interference received, including interference that may cause undesired operation.

Under Industry Canada regulations, this radio transmitter may only operate using an antenna of a type and maximum (or lower) gain approved for the transmitter by Industry Canada. To reduce potential radio interference to other users, the antenna type and its gain should be chosen so that the equivalent isotropically radiated power (e.i.r.p.) is not superior than necessary for successful communication.

Ce dispositif est conforme aux règles de la FCC part 15.

Son fonctionnement est sujet aux deux conditions suivantes :

- (1) le dispositif ne doit pas produire de brouillage préjudiciable, et
- (2) ce dispositif doit accepter tout brouillage reçu, y compris un brouillage susceptible de provoquer un fonctionnement indésirable.

Cet équipement a été testé et déclaré conforme aux limites d'un appareil numérique de classe B, conformément à la partie 15 des règles de la FCC. Ces limites sont conçues pour fournir une protection raisonnable contre les interférences nuisibles dans une installation résidentielle. Cet équipement génère, utilise et peut émettre de l'énergie radiofréquence et, s'il n'est pas installé et utilisé conformément aux instructions, peut causer des interférences nuisibles aux radiocommunications. Il est cependant toujours possible que des interférences se produisent dans le cadre d'une installation particulière.

Si cet appareil produit des interférences nuisibles à la réception des programmes de radio et de télévision —détectables lors de la mise hors tension ou en tension de l'appareil—l'utilisateur est encouragé à mettre en œuvre une ou plusieurs des mesures suivantes pour remédier à ces interférences :

- Réorienter ou déplacer l'antenne de réception.
- Augmenter la distance entre l'équipement et le récepteur.
- Branchez le matériel à une sortie sur un circuit différent de celui auquel le récepteur est branché.
- Prendre conseil auprès du commerçant ou d'un technicien de radio/TV expérimenté.
- Tout changement ou modification non expressément approuvé par la partie responsable des mesures de conformité peut amener l'utilisateur à se voir interdire l'usage de l'appareil.

Cet appareil est limité à l'exploitation des fréquences autorisées Partie 15, et ne peut pas être configuré par des utilisateurs finaux ou des installateurs professionnels à fonctionner en dehors des bandes autorisées.

L'émetteur/récepteur exempt de licence contenu dans le présent appareil est conforme aux CNR d'Innovation, Sciences et Développement économique Canada applicables aux appareils radio exempts de licence.

L'exploitation est autorisée aux deux conditions suivantes:

- (1) l'appareil ne doit pas produire de brouillage, et
- (2) l'appareil doit accepter tout brouillage radioélectrique subi, même si le brouillage est susceptible d'en compromettre le fonctionnement.

Conformément à la réglementation d'Industrie Canada, le présent émetteur radio peut fonctionner avec une antenne d'un type et d'un gain maximal (ou inférieur) approuvé pour l'émetteur par Industrie Canada. Dans le but de réduire les risques de brouillage radioélectrique à l'intention des autres utilisateurs, il faut choisir le type d'antenne et son gain de sorte que la puissance isotrope rayonnée équivalente (p.i.r.e.) ne dépasse pas l'intensité nécessaire à l'établissement d'une communication satisfaisante.

This device complies with FCC RF radiation exposure limits set forth for general population.

This device must be installed to provide a separation distance of at least 20cm from all persons and must not be co-located or operating in conjunction with any other antenna or transmitter.

Cet appareil est conforme à l'exposition aux radiations RF de la FCC.

Cet appareil doit être installé à une distance d'au moins 20 cm des personnes et ne doit pas être situé ou fonctionner conjointement avec une autre antenne ou un autre émetteur.

Professional Installation:

This device must be installed by a professional with the antenna supplied by VOGO. The reference of the Antenna is TLB-902 928-900LD-TNC. To optimize performances, the equipment must be placed at minimum 1 meter above the ground.

Cet appareil doit être installé par un professionnel avec l'antenne fournie par VOGO. La référence de l'antenne est TLB-902 928-900LD-TNC. Pour optimiser les performances, l'équipement doit être placé au moins 1 mètre au-dessus du sol.

Identification:

- FCC ID : 2AU6N-VO8161
- CANADAIC : 25704-VO8161
- Product with Bluetooth: Contains FCC ID SSSBC127-X and IC ID : 11012A-BC127

Product reference: USA/CANADA: VO8161X

Authorised representative in Canada

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USAGE RESTRICTIONS : THE USE OF VOKKERO GUARDIAN WIRELESS INTERFACE (WI) IN US/CAN

IMPORTANT: Before using the device, please observe the legal provisions in force in your country.

Table ID Frequencies for VOKKER-GUARD-FCC004-WI

H1 (US1)	25 channels within the 916.698MHz to 927.573MHz band
A1 (US2)	27 channels within the 902.188MHz to 916.063MHz band
H2 (US3)	25 channels within the 903.688MHz to 927.313MHz band
A2 (US4)	26 channels within the 902.750MHz to 926.375MHz band
H3	25 channels within the 902.188MHz to 917.938MHz band
A3	26 channels within the 903.313MHz to 917.563MHz band

INTRODUCTION

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ENVIRONMENTAL RECOMMENDATIONS

All superfluous packaging materials have been eliminated. We have done everything possible to make it easy to separate the packaging into three types of materials: cardboard (box), expanded polystyrene (filler material) and polyethylene (packets, foam protective sheets). Your device is composed of materials that can be recycled and reused if it is dismantled by a specialist company. Please observe local regulations concerning the manner in which waste packaging material, used batteries and your obsolete equipment are disposed of.

WARNINGS

Valid for :
VO8161B



Read the instructions in the manual.



The safety of this product is only guaranteed when it is used in accordance with its purpose.
Maintenance should only be carried out by qualified persons.

Please note: Do not install the equipment close to a heat source or in damp conditions.

Please note: When the equipment is open, do not carry out any operations other than the ones set out in this document.



Please note: Do not open the product as there is a risk of electrical shock.

Please note: For your own safety, you must ensure that the equipment is switched off before carrying out any work on it.



Please note: For your own safety, the power supply circuit must be SELV (Safety Extra Low Voltage) and must be from limited power sources.



The product must be equipped with a switching mechanism so that the power can be cut. This must be close to the equipment. Any electrical connection of the product must be equipped with a protection device against voltage spikes and short-circuits.

RECOMMENDATIONS REGARDING USE

- Before using the system, check that the power supply voltage shown in the user manual corresponds to your supply. If it doesn't, please consult your supplier.
- Place the device against a flat, firm and stable surface.
- The device must be installed in a location that is sufficiently ventilated so that there is no risk of internal heating and it must not be covered with objects such as newspapers, cloths, curtains, etc.
- The device must never be exposed to heat sources such as heating equipment.
- Do not place the device close to objects with naked flames such as lit candles, blowtorches, etc.
- The device must not be exposed to harsh chemical agents or solvents likely to damage the plastic or corrode the metal parts.
- The device must be attached to belt with the belt-clip.

DISPOSAL OF WASTE BY USERS IN PRIVATE HOUSEHOLDS



This symbol on the product or on its packaging indicates that this product must not be disposed of with your other household waste. Instead, it is your responsibility to dispose of your waste by taking it to a collection point designated for the recycling of electrical and electronic appliances. Separate collection and recycling of your waste at the time of disposal will contribute to conserving natural resources and guarantee recycling that respects the environment and human health. For further information concerning your nearest recycling centre, please contact your nearest local authority/town hall offices, your household waste collection company or the shop where you bought the product



Warning: If the charger is used with any other batteries or products whatsoever, there is a risk of an explosion. After use, the batteries must be disposed of at an appropriate recycling centre. They must not be thrown away to degrade in the environment. When batteries are replaced, the device must be correctly implemented.



Warning for Switzerland : the annex 4.10 of SR 814.013 Standard must be applied for batteries.



This symbol on the device or its packaging means the use of a DC voltage.

INTRODUCTION

The instructions given below will make it simple and easy for you to start using your VOKKERO® Guardian Wireless Interface (WI) communication system.

All of the operations described are shared by the versions of the VOKKERO® Guardian WI product listed below:
VO8161B

Note: the reference number for your device can be found on the label located on the base of the device.

The system is made up of the following elements:

- Wireless Interface box (WI)
- A power supply
- A radio antenna
- A USB cable

The WI interface makes it possible to operate a VOKKERO® Guardian wireless conference system with a wired communication system. In order to be able to configure the interface, you will need to link the equipment to a VOK-KERO® Guardian configurator/charger. When using it for the first time, you will need to configure it in order to ensure that the system is compatible with the VOKKERO® Guardian conference system.

All of the WI system's operational parameters are controlled by the configurator. This lets you access the settings menu via a touchscreen.

1. SYSTEM DESCRIPTION

1.1. VOKKERO® Guardian WI interface

1.1.1. Device interface description



1.1.2. General features

Parameters	Value
Supply voltage	24V nominal
Maximum consumption	300mA
Supply	Mains supply
Operational temperature range	-0°C / +45°C
Dimensions	230 x 110 x 50mm
Weight	650g
Standards	FCC CFR 47 part 15, RSS-247

2. STARTING THE INTERFACE

Before connecting the power supply, please ensure that the switch on the device is set to OFF

- To switch the device on, set the "On/Off" switch to ON.
- To switch the device off, set the "On/Off" switch to OFF.



2.1. Description of screen icons (default)



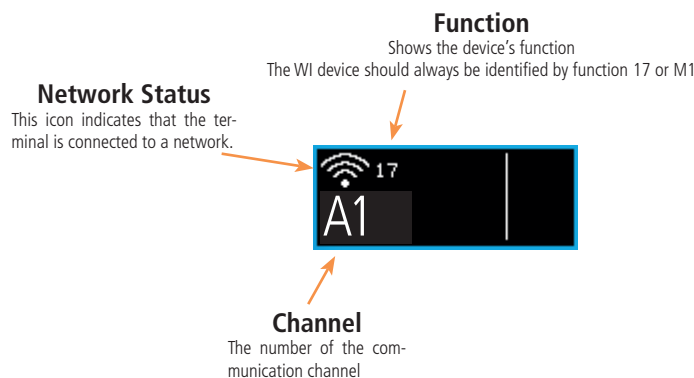
Once you have switched on the device, the LCD screen will light up and the VOKKERO® logo will be displayed.



The "Welcome" screen will then be displayed, followed by the device name. By default, the product's name will be "Guardian". This name can be modified on the configurator.

NOTE 1: all settings, including the volume settings, will be retained when the device is switched off and will remain the same once the device is switched back on.

2.2. How the interface works



2.3. CHANNEL/GROUP selection

When the device is switched on, you can change the communication channel (or group) with the 2 "high and low arrows" located on the front of the device. Pressing on the "up arrow" button will move it up a position, while pressing on the "down arrow" button will move it down a position.

2.4. "CALL" BUTTON

The "CALL" button lets you make a call to all other VOKKERO® Guardian wireless terminals. Simply pressing the button will trigger the call sequence: the button will flash red, you will hear a beep during the call and the device's vibrate function will be activated.

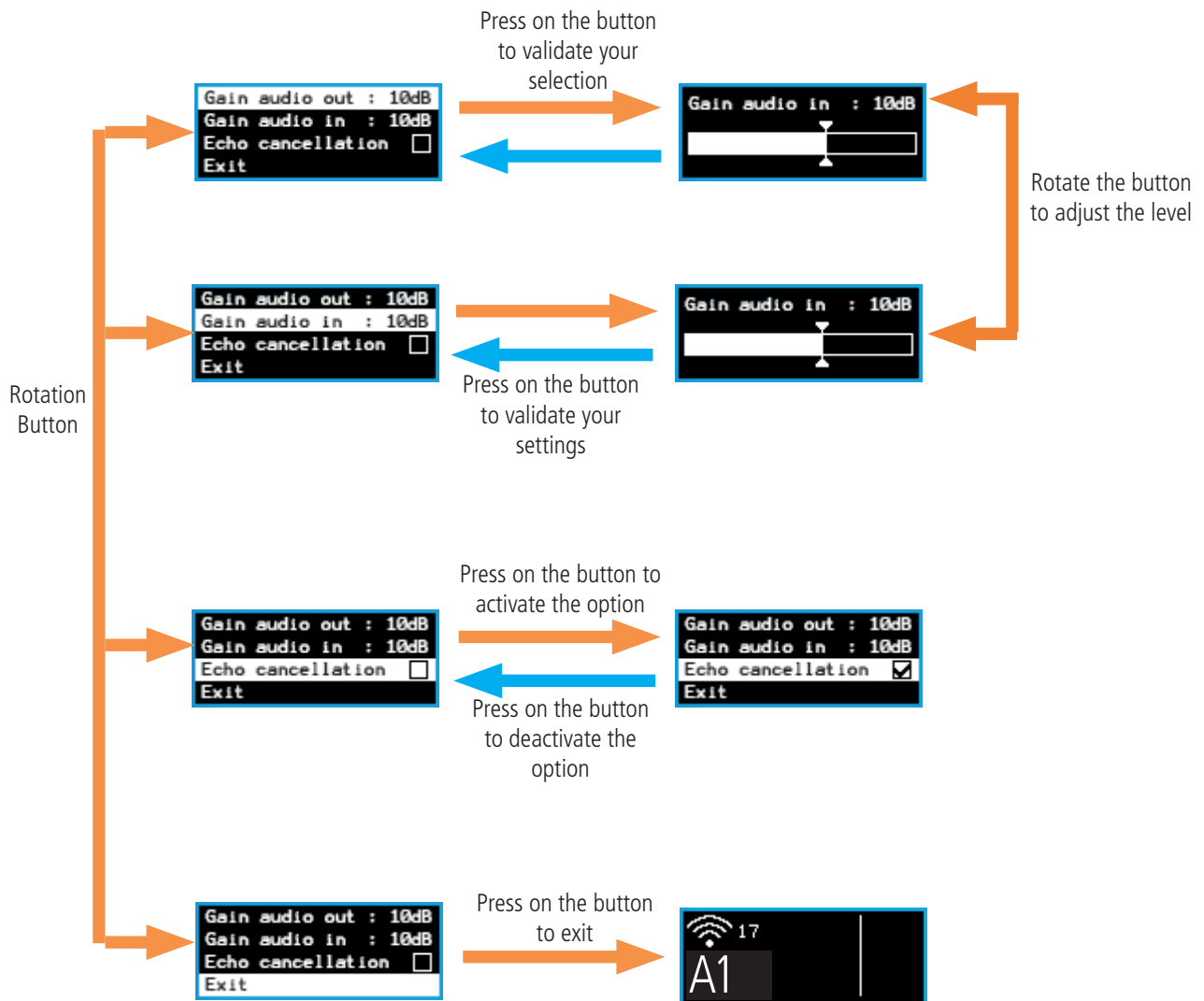
2.5. SETTINGS BUTTON

The settings button is a continuous rotation button with a validation function. A long press on the button will let you switch to audio configuration mode for input/output.

Rotating the button will allow you to navigate between the different available options. Pressing the button will allow you to validate.

The following settings are available:

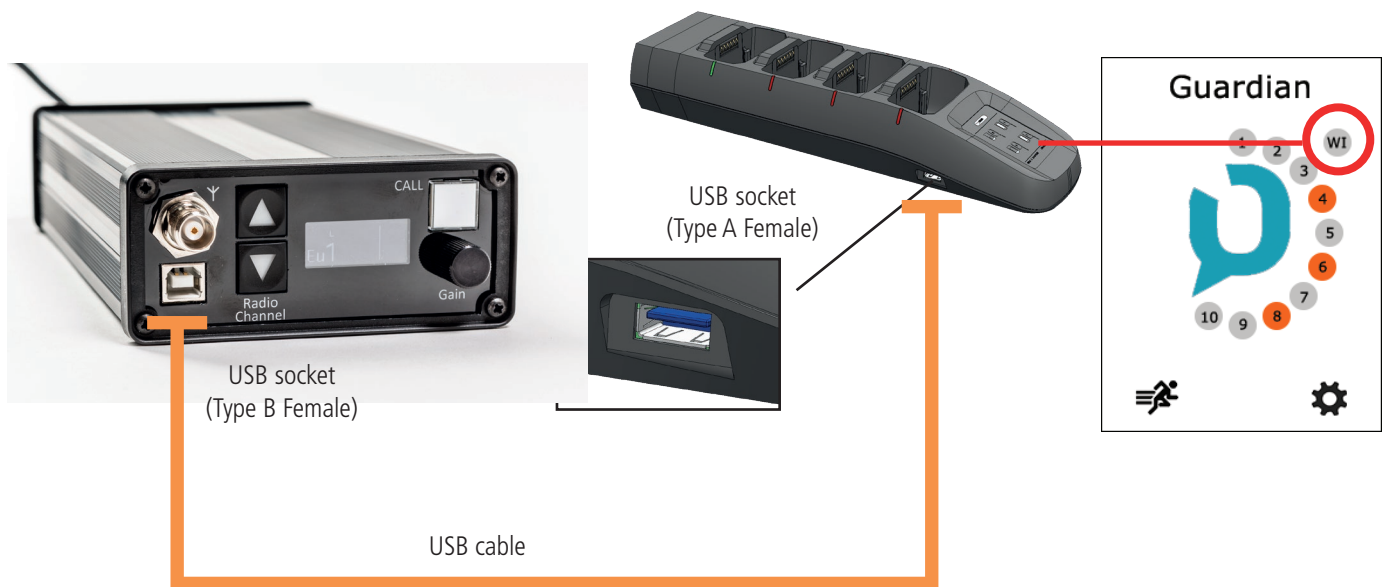
- Out audio gain: access the audio out gain settings menu
- In audio gain: access the audio in gain settings menu
- Echo cancellation: activate/deactivate the anti-echo option (full-duplex mode is no longer active with this mode)



3. RADIO CONFIGURATION

3.1. Connection

The interface can be connected to the configurator using the USB socket on the top of the device. It must be linked to the USB socket of the VOKKERO® Guardian configurator/charger. The USB cable comes supplied with your appliance. The WI icon will be displayed on the configurator's home screen.



3.2. Configuration with the VOKKERO® Guardian conference system

The WI interface must be configured at the same time as the other conference system equipment. If the WI interface is connected during the quick config operation, it will then be configured automatically and will be ready for use.

If a GUARDIAN terminal is placed on the first slot of the GUARDIAN configurator of the «Quick Settings» configuration pairing, the WI interface will have a normal user role like any other GUARDIAN terminal, except the one placed on the first slot which will be the MASTER (M1).

If the first slot of the GUARDIAN configurator remains empty at the time of the «Quick Settings» configuration pairing, the WI interface will be the MASTER (M1) of the VOKKERO network.

To find out how to launch the «Quick Settings» configuration pairing on the GUARDIAN configurator, please consult the VOKKERO® Guardian conference system user manual.

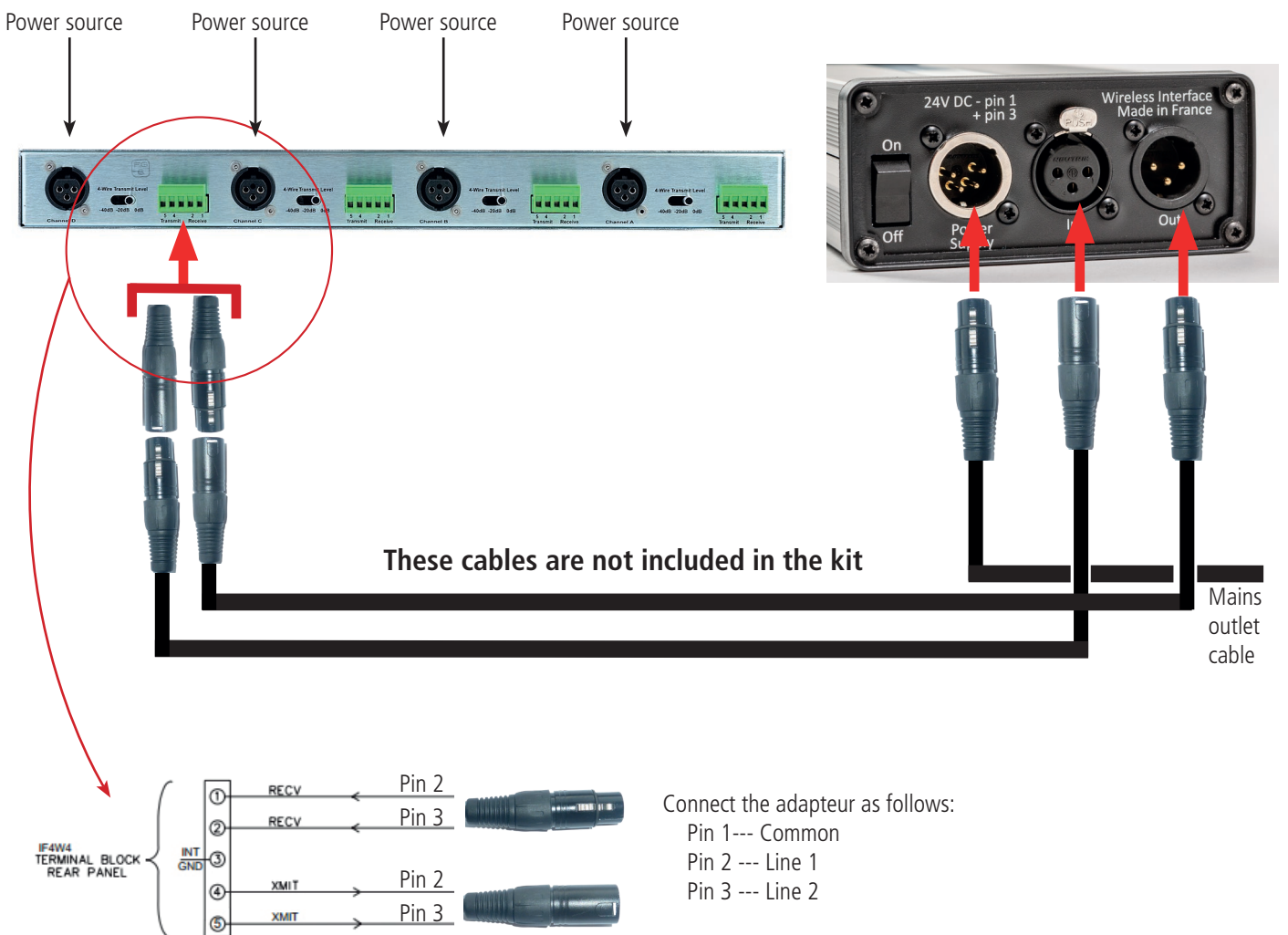
4. AUDIO CONFIGURATION

4.1. Configuration with 4-wire Intercom systems

The WI interface is designed to be connected to a 4-wire intercom. Below you will find 2 configuration examples:

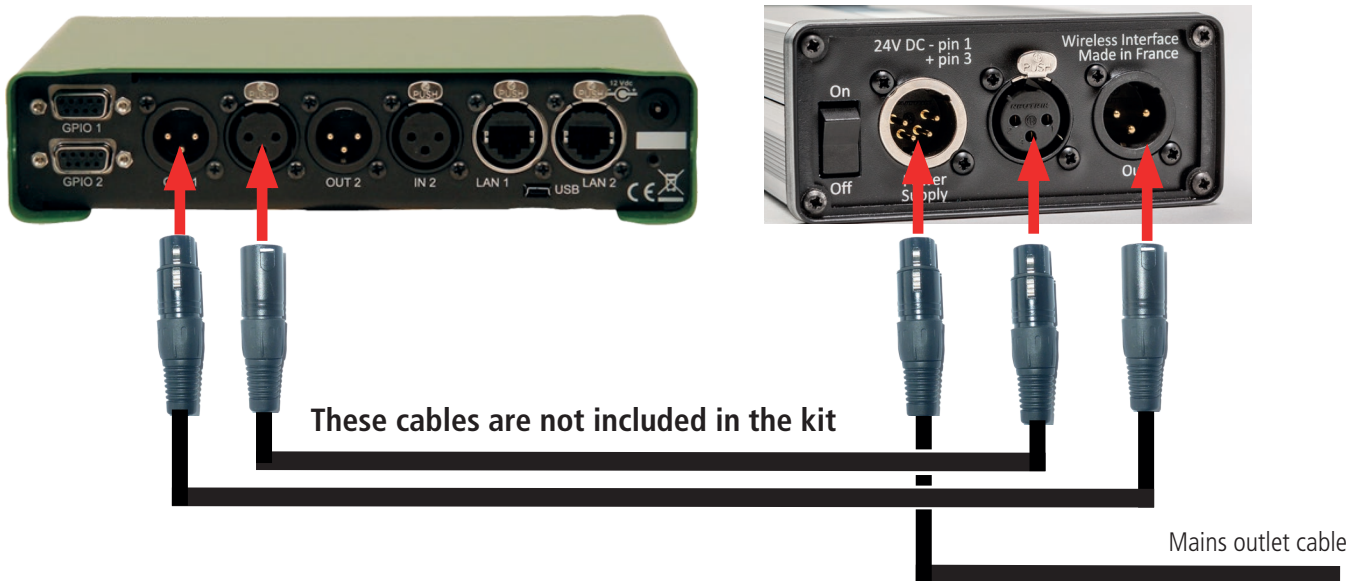
4.1.1. Clearcom 4-wire interface

- Connect a cable between the green connector of the clearcom interface and two XLR 3 pts male and female. In order to identify the cabling, refer to the Clearcom IF4W4 user guide.
- Connect an XLR 3 pts cable (male/female) between the "OUT1" connector of the 4-wire interface system and the "IN" connector of the Vokkero Guardian wireless interface.
- Connect an XLR 3 pts cable (male/female) between the "IN1" connector of the 4-wire interface system and the "OUT" connector of the Vokkero Guardian wireless interface.
- Connect the Vokkero Guardian wireless Interface power cable to another power supply.



4.1.2. GreenGo 4-wire interface

- Connect an XLR 3 pts cable (male/female) between the "OUT1" connector of the 4-wire interface system and the "IN" connector of the Vokkero Guardian wireless interface.
- Connect an XLR 3 pts cable (male/female) between the "IN1" connector of the 4-wire interface system and the "OUT" connector of the Vokkero Guardian wireless interface.
- Connect the Vokkero Guardian wireless Interface power cable to another power supply.



Adopted settings for the WI interface:

Out Audio Gain: 0dB

In Audio Gain: 12dB

Adopted settings for the GreenGo interface:

4-wire interface gain: 6db

Threshold: -45dB

4.2. Configuration with 2-wire Intercom systems

Operating the WI interface with a 2-wire Intercom system requires the use of a 2-wire/4-wire audio convertor.

Several material tests have been carried out, and we would recommend using the reference:

ALTAIR ALT4W2-200 with a CANFORD YL908 type "Y" cable

We would also recommend offsetting the antenna using an RF cable. Different lengths of RF cable or offset kit are available on request from our sales department.

The list of different 2-wire Intercom references found below is not exhaustive and the settings for the 2-wire/4-wire convertor and the Guardian WI Interface are given as an example.

4.2.1. Using with the ClearCOM MS-702 2-wire intercom

Adopted settings for the WI interface:

- Out Audio Gain: -6dB
- In Audio Gain: 34dB
- Echo cancellation: Yes

Adopted settings for the ALTAIR 2-wire/4-wire convertor:

- 2 potentiometers set at mid-level
- Input (Rx) switch: -40dB
- Output (Tx switch): 0dB

4.2.2. Using with the ALTAIR EF-200 2-wire intercom

Adopted settings for the WI interface:

- Out Audio Gain: -6dB
- In Audio Gain: 34dB
- Echo cancellation: Yes

Adopted settings for the ALTAIR 2-wire/4-wire convertor:

- 2 potentiometers set at mid-level
- Input (Rx) switch: -40dB
- Output (Tx) switch: 0dB

4.2.3. Using with the ASL BS-127 2-wire intercom

Adopted settings for the WI interface:

- Out Audio Gain: 0dB
- In Audio Gain: 34dB
- Echo cancellation: Yes

Adopted settings for the ALTAIR 2-wire/4-wire convertor:

- 2 potentiometers set at mid-level
- Input (Rx) switch: -40dB
- Output (Tx) switch: 0dB

4.2.4. Using with the RTS MS-2002 2-wire intercom

Adopted settings for the WI interface:

- Out Audio Gain: 0dB
- In Audio Gain: 34dB
- Echo cancellation: Yes

Adopted settings for the ALTAIR 2-wire/4-wire convertor:

- 2 potentiometers set at mid-level
- Input (Rx) switch: -20dB
- Output (Tx) switch: 0dB

VOKKERO[®]
RADIO COMMUNICATION SYSTEM