



# Univox® IR 1411

Infrared Transmitter

User Guide



Part no. 650300

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## Introduction

Thank you for choosing a Univox® product. We hope you will be satisfied!

Univox® IR 1411 is a compact, yet powerful IR transmitter for small to medium size venues. The sleek low-profile design is ideal for installation in boardrooms, houses of worship, cinema/theatres, courtrooms, nursing homes, auditoriums and class rooms etc.

Univox®IR 1411 works in conjunction with Univox® IRR-1 receivers. The powerful infrared transmitter features all-in-one modulator and 72-diodes emitter for high performance and large coverage – up to 730 m<sup>2</sup> with a single unit.

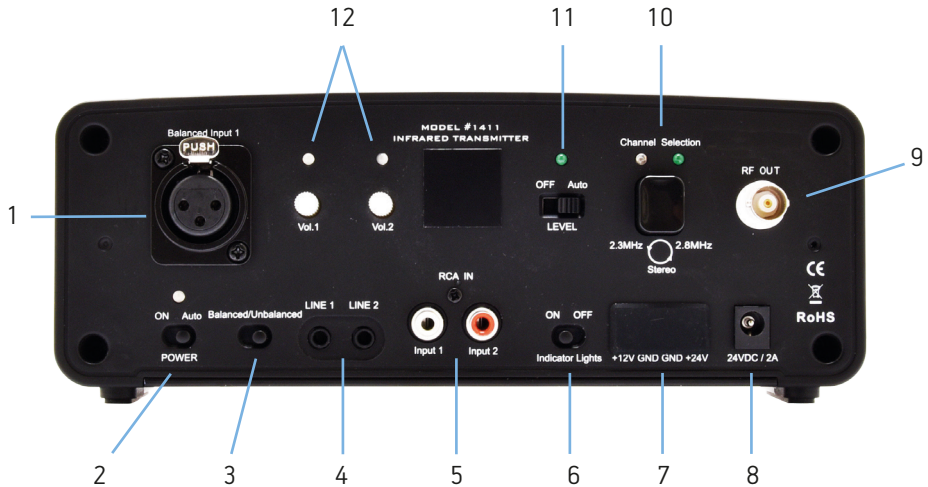
Univox®IR 1411 provides wireless assistive listening with supreme audio quality. With single mono- or dual channel stereo operation on 2,3 and 2,8 MHz carrier frequencies, the unit is ideal for applications where information security and overspill control are of importance.

Please read this user guide carefully before installation and use of this product.

### Included in the package

- Univox® IR 1411 transmitter
- Power supply unit
- Wall/ceiling mounting kit
- Twin 3.5mm mono to stereo cable
- Phoenix screw terminal
- Line level adapter XLR

# Features and settings



1. XLR – Balanced Line input
2. Power Save-mode switch
3. Balanced/unbalanced switch
4. 3.5 mm – Line 1 & 2 – Unbalanced line input
5. RCA – Line 1 & 2 – Unbalanced line input
6. Indicator Lights switch – "ON/OFF"
7. Header DC input/output
8. DC power supply input – 24VDC
9. RF Out – BNC jack
10. Channel/Frequency Selection toggle switch
11. Automatic Level Control (ALC) switch – "OFF/Auto"
12. Volume controls

## Details

### 1. XLR – Balanced Line input

Included adapter required for balanced line, 0dBu level sensitivity.

### 2. Power Save-mode switch

"ON" – unit is transmitting with or without input signal. LED indicates red.

"Auto" – Power save mode activated – transmitting only if input signal is present. LED indicates amber.

### 3. Balanced/unbalanced switch

Select between balanced XLR (1) or unbalanced 3.5 mm/RCA (4, 5) inputs

#### 4-5. 3,5 mm/RCA – LINE/Input 1 & 2 – Unbalanced line inputs

LINE 1/Input 1 – Controlled by Vol 1 volume control

LINE 2/Input 2 – Controlled by Vol 2 volume control

**Note:** With Auto Level activated the Volume level controls are disabled.

#### 6. Indicator Lights switch – "ON/OFF"

#### 7. Header DC input/output

24 VDC – Connection of external 24VDC supply voltage. **Note:** AC adapter is not connected.

12 VDC – Power supply to external emitter panel

#### 8. DC power supply input

**Note:** Univox supplied power adapter only.

#### 9. RF Out – BNC jack

Modulated HF signal output to expansion units or additional emitter panels.

#### 10. Channel/Frequency Selection toggle switch

Select the transmission frequency by pressing the button repeatedly.

2.3 MHz – Left LED indicates amber

2.8 MHz – Right LED indicates green

Stereo transmission, 2.3 MHz Left and 2.8 MHz right – both LEDs, amber and green indicates

#### 11. Automatic Level Control (ALC) switch – "OFF/Auto"

"OFF" – ALC disabled - LED off. Use level volume controls (12) to adjust the input level. "Auto" – ALC enabled - LED indicates green. The unit is equipped with automatic

adjustment of the audio level – recommended setting.

#### 13. Volume controls

Input level adjustment if Automatic level control (11) is disabled.

Volume 1 – XLR or Line/Input No.1

Volume 2 – Line/Input No.2

Indicator LED's for each input:

*Green* – nominal audio signal strength

*Amber* – approaching audio signal clipping. Indicators light up when the input signal level is 6dB below clipping.

*Red* – audio signal clipping input, approaching distortion. Adjust the input level so LED flickers red occasionally, indicating audio peaks.

## Placement

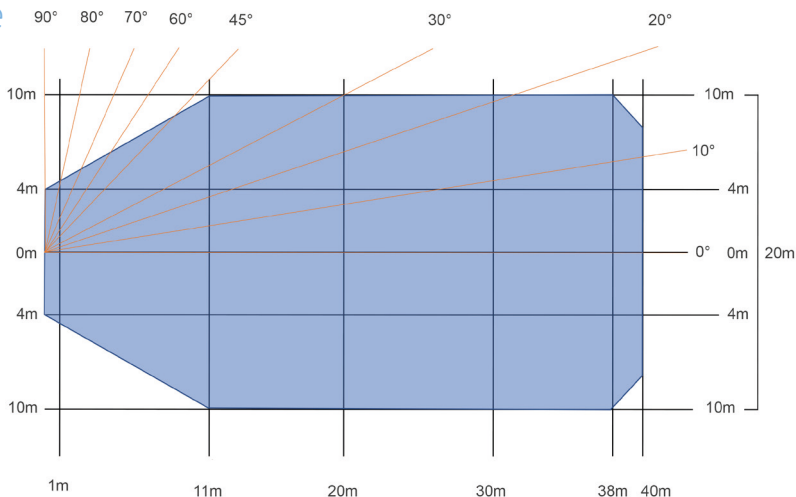
The unit is supplied with a universal mounting kit allowing for easy and quick installation. Select an appropriate mounting location, considering the shape and size of the room, to ensure optimal coverage. Recommended placement for best performance is above 2 m height, slightly angled (10-30 degrees) toward listening audience. Make sure the transmitter has direct line-of-sight to the audience.

## Operating Instructions

1. Connect the primary audio source to a suitable input:
  - Balanced: XLR Input (1).
  - Unbalanced: 3.5mm - Line 1 and 2 (4) or RCA – Input 1 and 2 (5)Set balanced/unbalanced switch (3) accordingly. *Adapter for XLR line level required.*
2. Connect the supplied power adapter to the DC supply input (8) and set Power switch to "ON". The red LED indicates power connection.
3. Set Audio Level Control (ALC) switch (11) to "Auto" – green LED is lit. Input level will be adjusted automatically - recommended setting.  
**Note:** Setting the switch in "OFF" position will disable ALC – green LED is off. Audio level for each input must be adjusted manually by Volume controls Vol 1 and 2 (12). Adjust the input level so both LEDs flicker red occasionally, indicating audio peaks.
4. Set the carrier frequency by pressing the Channel Selection Switch (10) repeatedly. Recommended setting for assistive listening mode is Stereo (2.3 and 2.8 MHz transmission) – both amber and green LED indicates.  
**Note:** Make sure both transmitter and receiver are set to the same channel frequency.

## Coverage

730m<sup>2</sup>



# Troubleshooting

## **Transmitter has no power**

- Verify that the power supply is connected properly, (red/amber LED on the transmitter should be lit, depending on the mode selected).
- Check the power adapter function, (green LED=ON). Replace if faulty.

## **No audio or poor audio quality (distortion)**

- Check the input signal connection.
- Verify that the balanced/unbalanced switch setting is in accordance with signal level and input connected. If connecting XLR, verify that the signal source connected to the XLR input is balanced.
- Check the Audio Level Control (ALC) switch setting, (green LED=ON). If disabled, (ALC switch=OFF), the input level should be adjusted by Vol1 and Vol2 level controls.
- Check and adjust the audio level, if necessary. The Volume Control LEDs are indicating red occasionally if the unit is transmitting correctly.
- Make sure the transmitter and receiver are operating at the same channel/frequency, (for best performance Stereo setting is highly recommended). Verify that both amber and green LED at the transmitter are lit, and receivers channel switch is set in S-mode (Stereo).
- Make sure the receivers are in the line-of-sight and range of the transmitter and the IR-light is not blocked in any way.

## **Audio Level indicators are not lit**

- Make sure the Indicator Light switch is in "ON" position
- Verify that the audio input is connected properly.
- Check that the balanced/unbalanced switch setting in accordance with signal level and input connected.

The Installation Guide is based on the information available at the time of printing and are subject to change without notice.

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## Maintenance

Under normal circumstances the product does not need any special maintenance.

Should the unit become dirty, wipe it with a clean damp cloth. Do not use solvent or strong detergents.

## Warranty

Product is covered by 2 years warranty.

The equipment should be installed following the instructions contained within this document. The product warranty doesn't cover failure caused by tampering, carelessness, improper handling or maintenance.

Use only the power adapter supplied with the unit.

## Service

In case of failure, if the product should not work properly after the troubleshooting has been performed, please contact your local distributor for further instructions.

Refer all servicing to qualified service personnel only. If the product is sent to Bo Edin AB, please enclose a filled Service Form, [www.univox.eu/support](http://www.univox.eu/support).

## Safety



The installer is responsible for installing the product in a way that may not cause risk of fire, electrical malfunctions or danger for the user. Do not cover the unit or the power adapter. Only operate the unit in a well ventilated, dry environment.

Do not remove any covers as there is a risk of electric shock. Please observe that the product warranty doesn't include faults caused by tampering the product, carelessness, incorrect connection/mounting or maintenance.

Bo Edin AB shall not be held responsible or liable for interference to radio or TV equipment, and/or to any direct, incidental or consequential damages or losses to any person or entity, if the equipment has been installed by unqualified personnel and/or if installation instructions stated in the product Installation Guide have not been strictly followed.

## Environment



To prevent possible harm to the environment and human health, please dispose of the product responsibly by following statutory disposal regulations.

## Technical data

<b>Univox® IR 1411 Transmitter</b>	<b>part no 650300</b>
<b>Modulation</b>	FM, + 35kHz nominal + 50kHz peak
<b>IR Light Wavelength</b>	870nm
<b>Carrier Frequency</b>	2.3MHz, 2.8MHz or Stereo: 2.3MHz (Left) and 2.8MHz (Right)
<b>Pre-emphasis</b>	50µs
<b>Audio Frequency response</b>	40Hz - 8kHz (±3 dB)
<b>Total Harmonic Distortion</b>	< 1%
<b>Signal-to-noise Ratio</b>	75dB
<b>Input 1 (XLR)</b>	Balanced XLR Impedance: >50Ω / >2kΩ Sensitivity: -17dBu (100mVrms) to 6dBu (1.5Vrms)
<b>Input 2 (Line 1/Line 2)</b>	Unbalanced Line, Stereo Input. Two 3.5mm connectors
<b>Input 3 (RCA IN)</b>	Unbalanced Line, Stereo Input. Two (RCA) Phono connectors Sensitivity: -14dBu (140mVrms) to 14dBu (4Vrms) Impedance: 10kΩ
<b>Indicators</b>	Green LED: nominal range of audio level Red LED: audio peak indicator, approaching audio distortion
<b>Output connection</b>	BNC x 1
<b>RF Output Voltage</b>	Approx. 750 mVrms (2Vpp)
<b>Output Impedance</b>	Approx. 50kΩ
<b>IR LEDs</b>	72 diodes
<b>Radiating Power</b>	Approx. 2W
<b>Coverage</b>	Up to approx. 730m <sup>2</sup> (6458ft <sup>2</sup> )
<b>Supply Voltage</b>	19VDC min - 28VDC max
<b>Power Supply Input</b>	100-240VAC 50/60Hz
<b>Power Supply Output</b>	24VDC @ 2A
<b>Power Connection</b>	2.5mm DC jack (or 4-Pin Phoenix connector)
<b>Weight</b>	450g (1lb); Power Supply: 360g (0.8lb)
<b>Dimensions</b>	(W) 210 x (D) 70 x (H) 80mm (8.3" x 2.8" x 3.1")
<b>Color</b>	Black



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