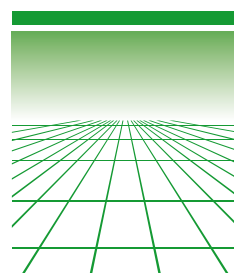


# Wireless TV listening systems



Enjoy the sound of your favourite TV show right near your ear – at your own individual volume and without compromise.

**30** Partner for audiological systems for 30 years





# swing<sup>digital</sup>



The volume is located on the top side of the receiver, it can be easily accessed at any time.

The settings for the right-left balance, treble and bass can be adjusted via the controls at the back of the receiver.



## State-of-the-art listening

»swing-digital« reveals a new quality of audio transmission from the TV set, hi-fi system, PC or other devices to the under-the-chin receiver or a teleloop.

The 2.4 GHz frequency band allows wireless transmission of high bit rates without compression. Along with the intelligent audiologic frequency processing, this results in exemplary clear and clean sound in superb quality.

## Individual sound settings

The swing-digital set contains the transmitter and receiver as well as all necessary connection cables and adapters.

To connect the transmitter to the TV-set, »swing« systems have a TOSLINK port (optical signal transmission). This ensures flawless transmission between the TV-set and the transmitter.

You can freely adjust the volume (up to +125 dB), the sound as well as the balance on the portable receiver.

## Different hearing components at your choice

Choose between the under-the-chin receiver or the neckloop receiver.

The ergonomically designed under-the-chin receiver comes supplied with two earpiece versions: The standard shape and a tapered shape for smaller auditory canals. The earpieces of the under-the-chin receiver can be pivoted. This ensures their safe fit in your ear even when you change your posture.

The neckloop receiver transmits the sound inductively to your hearing aid or CI systems with integrated T-coil. Furthermore it has connection jacks for more audio components like headphones, earphones or induction couplers.

»swing-digital«:  
The **2.4-GHz** audio transmission system for the full sound spectrum in highest quality: Understand speech clearly, enjoy music in relaxation

### »swing-digital« Sets

- »swing-digital« set, transmitter with under-the-chin receiver  
Order number: **A-4130-0**
- »swing-digital LR« set, transmitter with teleloop receiver  
Order number: **A-4135-0**

### »swing-digital« components

- Separate under-the-chin receiver  
Order number: **A-4156-0**
- Separate receiver LR with teleloop  
Order number: **A-4161-0**

### Technical Data

Transmission method:	digital radio (stereo)
Carrier frequency:	2.4 GHz
Audio frequency transmission range:	20 - 20000 Hz
Distortion factor:	< 1 %
Signal-to-noise ratio:	> 90 dB
Work range:	0° C - 55° C
<b>Receiver:</b>	
Operating time per battery pack:	approx. 6 h
Battery type:	Li-Polymer approx. 240 mAh
Number of battery packs:	1
Charge time:	approx. 5 h (2.5h for 90% charge)
Maximum volume:	approx. 125 dB (A)
Weight:	approx. 58 g
<b>Transmitter:</b>	
Power consumption:	approx. 4.5 VA
Power supply:	12 Volt DC
Power supply mains unit:	100-240 Volts 50-60 Hz
Weight:	approx. 43 g
Range:	up to 45 m



»swing-IR«:  
 The **infrared** audio-  
 transmission system of  
 the latest generation:  
 Experience TV sound  
 in impressively  
 high sound purity,  
 as unique as your  
 listening requirements

»swing-IR« – the most recent  
 development of the proven inf-  
 rared transmission technology

»swing-IR« transmits the signals  
 between transmitter and receiver  
 with infrared light impulses. This  
 excludes influences and interferen-  
 ces by electromagnetic radiation of  
 other electronic devices.

In the field of view of the transmitter,  
 you can receive the sound of your

radio, hi-fi system or your TV set  
 in high quality – range: approx.  
 15 metres.

The individual setting possibilities  
 for volume and sound support,  
 combined with the intelligent audio-  
 logic speech frequency processing  
 deliver a notably clear speech re-  
 production (volume up to +125 dB  
 -please consult the manual when  
 adjusting the settings).

**For your choice: Under-the-chin  
 receiver or neckloop.**

The swing-IR set contains trans-  
 mitter and receiver as well as all  
 necessary connection cables and  
 adapters.

You can receive the TV sound via  
 a lightweight under-the-chin recei-  
 ver. As standard it comes with two  
 earpiece versions, the standard  
 shape and a tapered shape for  
 small auditory canals. A receiver  
 with neckloop is also available.  
 It transmits the audio signals via  
 induction to your hearing aid or CI  
 system with integrated T-coil.

The neckloop receiver also has  
 a connection jack for more audio  
 components like headphones,  
 earphones or induction couplers

Technical Data	
Transmission method:	infrared (stereo)
Carrier frequency:	2.3 MHz / 2.8 MHz
Audio frequency transmission range:	50 - 16000 Hz
Distortion factor:	< 1 %
Signal-to-noise ratio:	> 90 dB
Work range:	10° C – 40° C
Receiver:	
Operating time per battery pack:	approx. 7 h
Battery type:	Li-Polymer approx. 240 mAh
Number of battery packs:	1
Charge time:	approx. 5 h (2.5 h for 90% charge)
Maximum volume:	approx. 125 dB (A)
Weight:	approx. 58 g
Transmitter:	
Power consumption:	approx. 4.5 VA
Power supply:	12 Volt DC
Power supply mains unit:	100-240 Volts 50-60 Hz
Weight:	approx. 43 g
Range:	up to 15 m

»swing-IR« Sets

- »swing-IR« set, transmitter  
 with under-the-chin receiver  
 Order number: **A-4018-0**
- »swing-IR LR« Set, transmitter  
 with teleloop receiver  
 Order number: **A-4016-0**

»swing-IR« components

- Separate under-the-chin receiver  
 Order number: **A-4044-0**
- Separate receiver LR  
 with teleloop  
 Order number: **A-4053-0**

# swing<sup>IR</sup>

To connect the transmitter to the TV-set, »swing« systems have a TOSLINK port, a modern standardised light wave conductor port system for optical signal transmissions. This ensures flawless transmission between the TV-set and the »swing« transmitter.

In the case of infrared transmission, reception is limited to the room in which the transmitter is active. It is therefore possible to utilize several systems in neighbouring rooms without influencing or interfering with one another.

»swing-IR« set with under-the-chin receiver

»swing-IR LR« set, receiver with neckloop

Just like »swing-digital«, the settings for the right-left balance, treble and bass can be adjusted for the »swingIR« systems via the controls on the back of the receiver.



»Submerged in TV sound – and if I wish to talk to the people around me, I simply switch my »introson 2.4« onto communication.«



#### »introson 2.4« – TV audio system with communication feature

With an adjustable volume of up to 120 dB, the »introson 2.4« thoroughly impresses with its remarkably clean and clear audio reproduction and distinctive high quality sound. The 2.4 GHz frequency band guarantees a wireless transmission with high bit rates, without compression.

The tone can be adjusted with the push of a button - either selective or all frequencies simultaneously. The volume is set with the control dial.

#### TV sound or communication?

»introson 2.4« supports both.

A special comfort feature of »introson 2.4« is the option to switch over from receiving the television sound to communication by push of

a button. An integrated microphone picks up the sound around you and reproduces it back over the receiver. This way, interaction with other people in the room is possible at any time.

#### Variants

»introson 2.4« sets are available in white or black, either with under-the-chin- or neckloop receiver. The latter serves for the inductive transmission of sound onto hearing aids or CI systems equipped with a T-coil.

#### »introson 2.4«, ready-to-connect sets with transmitter and receiver

introson 2.4 Set with under-the-chin receiver, colour: **white** Order number: **A-4103-0**

introson 2.4 Set with under-the-chin receiver, colour: **black** Order number: **A-4103-S**

introson 2.4 Set with neckloop receiver, colour: **white** Order number: **A-4113-0**

introson 2.4 Set with neckloop receiver, colour: **black** Order number: **A-4113-S**

#### Technical data

Transfer method/ mode:	Digital RF (stereo)
Carrier frequency:	2.4 GHz
Audio frequency transmission range:	30 - 20000 Hz
Harmonic distortion:	< 0.5 %
Signal-to-noise ratio:	typically > 75 dB
Operating temperature:	0 °C - 40 °C

#### Receiver

Operating time per battery:	approx. 4 h
Battery type:	Lithium Polymer 3,7 V 350 mAh
Number of batteries:	2
Charging time:	approx. 5 h (2,5 h for 90% charge)
Maximum volume:	approx. 120 dB(A) a
Weight: approx.	66 g (including battery)

#### Transmitter

Power input:	5 V DC
Power supply:	100-240 Volt 50-60 Hz
Weight: approx.	104 g
Range:	up to 25 m (open area)



**Technical data: LH-055TV**

Transmission method:	via connector cable 3.5 / 6.3 mm jack
Audio frequency transmission range:	20-20000 Hz
Distortion factor:	0.5 %
Max. volume:	approx. 115 dB (A)
Weight:	90 g
Range:	6 m cable length
Impedance:	32 Ω

**»introson IR« – listening over infrared**

The wireless infrared TV audio system »introson-IR« offers excellent value for money and features a feather-weight under-the-chin receiver. The user adjusts the volume, the sound as well as the right/left balance using the relevant controller on the receiver. As with all infrared transmission systems, there must be a given line of sight between the transmitter and receiver.

The transmitter is directly connected to the audio signal source (e.g. a TV-set) via cable and serves as charging station for the receiver.

**LH-056TV: A comfortable TV headphone system with high quality sound**

The TV headphone system with integrated volume controller allows a separate setting for the left and the right side. With its excellent

audio- and voice reproduction, this lightweight headphone makes even prolonged TV viewing a pleasurable and relaxing experience. Five metres of cable connect to the audio source (e.g. TV-set), giving the user generous range of movement. **(Order number: A-4881-0)**

**introson-IR**

■ introson IR Set, ready-to-connect, with under-the-chin receiver  
Order number: **A-4003-0**

**Technical data »introson-IR«**

Transmission mode:	Infrared (Stereo)
Carrier frequency:	2,3 MHz / 2,8 MHz
Audio frequency transmission range:	15-20000 Hz
Harmonic distortion:	< 1 %
Signal-to-noise ratio:	typically 60 dB
Operating temperature:	0 °C - 40 °C

**Receiver**

Operating time per battery:	approx. 12-13 h
Battery type:	NiMH 750 mAh
Number of batteries:	1
Recharging time:	approx. 8 h
Maximum volume:	approx. 120 dB(A)
Weight:	approx. 56 g

**Transmitter**

Power supply:	12 Volt DC
Power adapter:	100-240 Volt 50-60 Hz
Weight:	approx. 172 g
Range:	up to 12 m



**Not all ears are the same  
– various ear pads and  
original accessories for  
our TV audio systems.**

Humantechnik TV listening systems also allow extended configurations, for example utilizing a single transmitter with multiple receivers. We recommend using TV listening systems with infrared transmission for media rooms of cultural or social institutions.

The transmitters can supply the individual receivers of a larger audience with audio signals.

Multiple chargers or additional transmitters are available from the Humantechnik range of products, for configurations with a larger amount of receivers. High-power transmitters are also available for the supply of larger rooms.

Just ask! We will gladly inform you about possibilities and additional components provided in the Humantechnik product range.

**S/PDIF audio converter,  
Order-No.: A-4963-0**

*The S/PDIF converter converts digital signals of corresponding audio sources to analogue signals and makes them compatible for systems with analogue inputs. The power is supplied via a mains power unit, which is included in the delivery.*



**Silicone ear pads for under-the-chin »swing« receivers\* Order number**

<b>1</b>	Standard earpieces (2 pairs)	A-4981-0
	Standard earpieces, bulk pack (24 pairs)	A-4982-0
<b>2</b>	Tapered version (2 pairs)	A-4994-0
	Tapered version, bulk pack (24 pair)	A-4995-0

**Silicon ear pads for under-the-chin receiver »introsion 2.4« Order number**

<b>3</b>	Standard ear pad (2 pairs)	A-4997-0
	Standard ear pads, bulk pack (24 pairs)	A-4998-0

**Silicon ear pads for under-the-chin receiver »introsion-IR« Order number**

<b>4</b>	Standard ear pad (2 pairs)	A-4985-0
	Standard ear pads, bulk pack (24 pairs)	A-4987-0
<b>5</b>	Tapered version (2 pairs)	A-4988-0
	Tapered version, bulk pack (24 pair)	A-4989-0
<b>6</b>	Perforated version (2 pairs)	A-4993-0
	Perforated version, bulk pack (24 Paar)	A-4992-0

**Spare batteries Order number**

<b>7</b>	Spare battery for »swing«	A-4969-0
<b>8</b>	Spare battery for »introsion 2.4«	A-4968-0
<b>9</b>	Spare battery for »introsion IR«	A-4966-0

**Replacement cable sets Order number**

	Connection cable set »swing«	A-4961-0
	Connection cable set »introsion«	A-4958-0



**HUMANTECHNIK**

**HUMANTECHNIK GmbH**

Im Wörth 25 · D-79576 Weil am Rhein  
Telefon: +49 (0) 76 21 / 9 56 89 - 0  
Fax: +49 (0) 76 21 / 9 56 89 - 70  
Internet: www.humantechnik.com  
E-Mail: info@humantechnik.com

We provide a comprehensive range of competent advisory services.