

# Domino Pro

## Personal listening system



 **Bellman & Symfon®**  
DESIGN FOR EARS



### Features

**Digital signal processing**  
Sound with incredible detail

**Encrypted broadband link**  
Secure from eavesdropping

**Directional microphones**  
Useful in busy surroundings

**Pocket size and light**  
Fits discretely in your pocket

**Domino Pro** is a personal listening system that helps you hear better in most everyday situations, whether you use hearing aids or just suffer the occasional hearing difficulty.

**Digital signal processing.** Domino Pro uses digital state-of-the-art signal processing technology. As a result, the system delivers music and speech with incredible detail, even in the toughest listening conditions.

**Worry free communication.** Domino Pro uses the 2.4 GHz global frequency standard for wireless broadband communication, just like your Wi-Fi computer at work. This means you can use your Domino Pro system anywhere in the world.

The system uses secure 128-bit digital encryption technology; which makes it virtually impossible to eavesdrop.

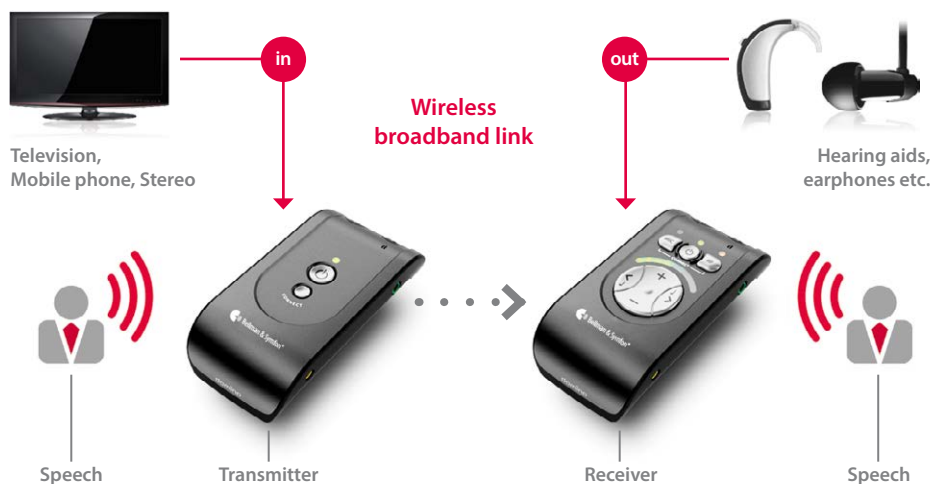
**Zoom the sound.** Both units are equipped with omni- and directional microphones. With a directional microphone, you can 'point' to the person talking, reducing the background noise.

**Pocket size and super light.** The units are as small as a modern cell phone and weigh just 2½ oz each. So they can be kept discretely in your pocket without weighing you down.

**Easy to use.** The system is virtually intuitive to use. All functions are accessed with the simple press of a button and there are no complicated menus to navigate.

**Long lasting power.** The units are powered with rechargeable lithium-ion batteries, just like a modern cell phone. So you never need to worry about buying new batteries.

**Enjoy music and TV.** Connect the Domino Pro transmitter to your TV or stereo system and enjoy wireless broadband Hi-fi sound at your own volume.



# Technical specifications

## Size and weight

- Height: **3.9", 99 mm**  
Width: **1.9", 48 mm**  
Depth: **0.9", 22 mm**  
Weight: **2.4 oz, 74 grams / unit**



## Input signals

- Microphones: Built in omnidirectional and directional microphones on both units
- External sound source input: 2.5 mm stereo jack plug (0 dBV max input signal)

## Output signals

- Headphone socket: 3.5 mm stereo jack plug
- Distortion: 0.05% THD (electrical)
- Frequency range: 40-10 000 Hz
- Tone control: 9 steps
- Volume control: 9 steps, cut-off frequency 1.6 kHz
- Output power: 100 mW (16 Ω load)

## Radio communication

- Frequency 2.4 GHz, uses 3 frequencies
- Range 25 m indoors, clear line of sight  
100 m outdoors, clear line of sight
- Characteristics:  
Encrypted communication  
Automatic channel searching  
Coexists with other radio transmitters operating on the 2.4 GHz frequency band

## Environmental requirements

- Operating temperature: 32° to 95° F (0° to 35° C)
- Relative humidity: 5% to 95% (non condensing)

## In the box

- BE2230 Transmitter
- BE2210 Receiver
- BE9142 Universal charger
- BE9241 EU-plug
- BE9135 Neck straps with safety clasp (2)
- BE9124 In-ear stereo earphones



- BE9141 Durable hard-top travel case
- BE9136 Tie-clip microphone
- BE9137 Stereo cable, 1.5 m with adapter from 3.5 mm jack to RCA (phono)
- BE9139 Charger cable
- BE9159 / BE9161 Neck loop
- User manual and pocket reference guide

## Power and battery

- Built in rechargeable lithium-ion battery on both units
- Operating time: up to 12 hours (With included light weight battery)
- Charging time: 4 hours (With included light weight battery)

## Acoustic specifications

- Maximum output using BE9124 earphones 132 dB SPL
- Gain at full volume using BE9124 earphones (60 dB SPL input signal):  
57,5 dB @ 1kHz      56 dB HFA
- Distortion  
Using BE9124      0.08 % THD  
Using BE9122      0.6 % THD

## Regulatory requirements

- Complies with the following requirements: **CE, FCC, RoHS, WEEE, RCM and UL**



## Receiver button and controls



## Transmitter button and controls



## Accessories

The following accessories are available:

- BE2210 Additional receiver unit
- BE9122 Stereo headphones
- BE9124 Stereo in-ear earphones
- BE9403 Stetoclips
- BE9127 Tie-clip microphone
- BE9126 Cable kit, 5 m (stereo) incl. adapter from 3.5 mm stereo tele jack to RCA (phono)
- BE9159/BE9161 Neck loop

© 2020, Bellman & Symfon AB

Bellman and Bellman & Symfon are registered trademarks owned by Bellman & Symfon AB, all rights reserved. All Product designs are patented. Subject to change without prior notice.

BE2210\_048DAS003\_EN

[bellman.com](http://bellman.com)

# In-depth technical information

## Features

- Digital Signal Processing, DSP
- Omni directional and zoom electret microphones
- Dynamic range compressor
- Dynamic noise reduction
- Adaptive feedback manager
- Radio transmission using broadband technology
  - Uses the non-licensed 2.4GHz ISM band
  - One transmitter to one or multiple receivers
- Intuitive user interface
  - LED light bar for excellent readability
  - Clear indication of Volume, Tone, Mic & RF mode
  - Low battery warning indicator
- Auxiliary stereo signal input (2.5 mm tele jack)
- Headphones stereo output (3.5 mm tele jack)
- Mix mode mixes sound from transmitter and receiver
- Auto mute when switching between signal sources
- High gloss finish to minimize handling sound
- Requires no individual fitting
- Built-in rechargeable lithium-ion batteries
- BE9142 USB universal charger with 4 mains plugs for EU, GB, US & AU are included
- BE9141 Durable hard-top travel case included
- BE9124 Earphones included
- BE9136 Tie-clip microphone included
- BE9137 Stereo Cable Kit with RCA adapter included
- BE9135 Neck straps with safety clasp and polished stainless steel belt clips included
- **Supported configuration**  
1 Domino Pro transmitter and 1+ Domino Classic receiver(s) and 1+ Domino Pro receiver(s).
- **Non recommended configuration**  
1 Domino Classic transmitter and 1+ Domino Classic receiver(s) and 1+ Domino Pro receiver(s).

## Technical specifications

- Dimensions: 99 mm (h) x 48 mm (b) x 22 mm (d)
- Weight: BE2210: 74 g, BE2230: 70 g
- Batteries: Built in rechargeable lithium-ion, 617 mAh
- Operating time: 8-12 hours (fully charged)
- Charging time: 4 hours (max)
- Ext. Mic./Aux. in connector: 2.5 mm stereo tele jack
- Headphones connector: 3.5 mm stereo tele jack
- Volume and Tone control: 9 steps
- Power switch: On/Off toggle button
- Mic and RF mode: Separate mode select buttons
- External microphone / Aux in selects automatically when plugged in
- Dynamic Range Compressor
  - Dynamic gain range 0-35 dB
  - Compression 3:1
  - Expansion 1:1.5
  - Attack time 20 (25) ms ( $\geq 3$  kHz)
  - Release time 110 (200) ms ( $> 3$  kHz)
- 10 channel dynamic noise reduction
- Adaptive phase-invert feedback cancellation
- Digital signal processing
  - 22 050 kHz sampling frequency
  - 16 bit resolution in stereo
- Digital radio transmission
  - 2.4 GHz ISM band, 3 channels
  - Automatic channel allocation
  - 128 bit encryption
- Topology: Point-to-point or point-to-multipoint
- Diversity  
2 antennas receive, 1 antenna transmits Rx + Rx/Tx
- Radio range  
25 m indoors, clear line of sight  
100 m outdoors, clear line of sight
- Transmitter output power: max 25 mW





## Acoustic specifications





- Maximum output saturation
  - Using BE9124 Headphones  
BE2210: 124.3 dB SPL / BE2230: 124.3 dB SPL (@ 2.5 kHz)
  - Using BE9124 Earphones  
BE2210: 132.0 dB SPL / BE2230: 130.5 dB SPL (@ 5 kHz)
  - Using BE9403 Stetoclips  
BE2210: 145.6 dB SPL / BE2230: 145.6 dB SPL (@ 1 kHz, 90 dB SPL)
- Gain, full volume (1 kHz, 60 dB SPL input signal)
  - Using BE9122 Headphones  
BE2210: 42.5 dB / BE2230: 44.0 dB
  - Using BE9124 Earphones  
BE2210: 55.0 dB / BE2230: 57.5 dB
  - Using BE9403 Stetoclips  
BE2210: 69.6 dB / BE2230: 69.6 dB
- Gain, full volume (60 dB SPL input signal, HFA)
  - Using BE9122 Headphones  
BE2210: 46.5 dB / BE2230: 49.0 dB
  - Using BE9124 Earphones  
BE2210: 51.5 dB / BE2230: 56.0 dB
  - Using BE9403 Stetoclips  
BE2210: 52.0 dB / BE2230: 59.4 dB
- Distortion
  - Using BE9122 Headphones  
0.6 % THD
  - Using BE9124 Earphones  
0.08 % THD

## Electrical specifications

- Output power tele-jack 100 mW at 16  $\Omega$  load
- Impedance, headphones 8 – 72 Ohm
- Distortion 0.05 % THD
- Dynamic range 95 dB
- Frequency range 40 – 10 000 Hz
- Tone control
  - Break point at 1.6 kHz
  - Tone, high: +10dB@3.15 kHz, -6dB@250Hz
  - Tone, mid: flat
  - Tone, low: -10dB@3.15 kHz  
No bass boost
- Line in sensitivity  
0 dBV (maximum input level)

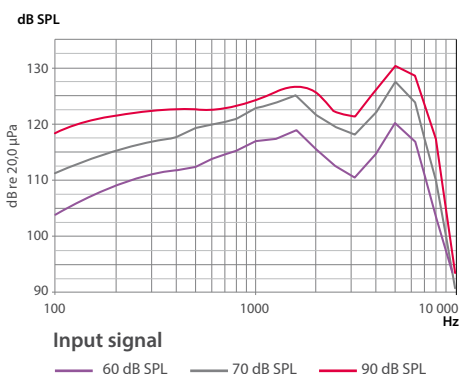
## Advanced settings menu

-  **Balance control**  
Compensates for example for hearing loss in one ear. 5 dB / step.
-  **Basic attenuation**  
Trim the attenuation to a specific hearing accessory. 3 dB / step.
-  **Stereo/Mono**  
Only effects the line-in signal. Used for neck loop and stetoclips.
-  **Bass reduction**  
Reduces low frequency interference from fans, road-noise etc.

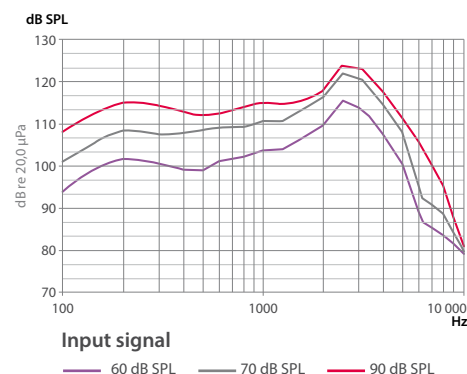
-  **Tone control blocking**  
Makes it easier for some end users to handle the Domino.
-  **Tone control preset**  
Select preset tone. Used together with Tone control blocking.
-  **Reset to factory settings**  
Resets all settings to the default factory settings.
-  **Software version**  
Used primarily for service purposes.

Detailed information is available in the user manual appendix.

## Output using BE9124 Earphones



## Output using BE9122 Headphones



## Output using BE9403 Stetoclips

