

Foundation of the company in Berlin

Our know-how gained from many years of experience and highest precision of manufacture is the basis for the world-wide popularity of our products. Our Aviation headsets are developed and produced mainly by hand. Thus each headset features a touch of passion and precision gained from more than 85 years of experience.

# PRECISION AND PASSION.

The development of dynamic headphones and microphones are milestones in beyerdynamic's history. Founded in Berlin in 1924, today the company, which is headquartered in Heilbronn, is one of the leading suppliers in the market for headphones, microphones, headsets and conference systems. beyerdynamic develops and produces innovative solutions in Germany for an ever-growing clientele with a high quality requirement.



DT 48 – the first dynamic headphone

1924



M 19 – development of dynamic studio microphones

1937



Start of production of the first "Transistophone" wireless microphone system

1939



Queen Elizabeth with the M 88 microphone

1962



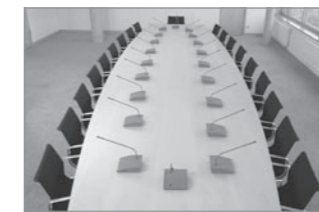
DT 880 – dynamic headphone with electro statically playback quality

1963



MCD 100 – world's first digital studio microphone

1980



MCW analogue – world's first wireless conference system

1997



MCW-D 50 – wireless, digital microphone unit with "Revolutio" line array microphone technology

1999



T1 – first headphone with superior Tesla technology drivers

2009

2010

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Digital Adaptive Noise Reduction

Mobile phone + music interface

Build your own: [www.beyerdynamic.com/aviation](http://www.beyerdynamic.com/aviation)

# HS 800 Digital

INNOVATION AT ITS BEST.

The new HS 800 Digital uses state of the art digitally controlled active noise reduction. Using a high-speed clocked microprocessor, beyerdynamic combines feedback- and feedforward-algorithms first time in a digitally controlled system. The result is a superior noise cancellation. Also in comfort the HS 800 Digital sets standards: All cushions are covered with fine leather. The headband has a special shape to keep pressure away from the sensitive fontanelle at the top of the head. The ultra-soft leather ear pads with viscoelastic filling make every single flight a relaxing experience.

- ▲ Outstanding ambient noise attenuation due to Digital Adaptive Noise Reduction (DANR)
- ▲ Ear pads with extra soft leather and viscoelastic filling
- ▲ Audio box to connect iPhones, mobile phones or music players (supplied with 3 connecting cables)
- ▲ Powered by two mignon batteries (HS 800 Digital and HS 800 Digital Rotor) or via the on-board power supply system (12 - 36 V) with the supplied 3-pin male XLR cable (HS 800 Digital) – delivery includes 3-pin socket
- ▲ Auto Mute – automatic volume reduction (muting) of phone or music player when intercom signals are received (selectable function)
- ▲ Automatic switch-off function when not in use
- ▲ Balanced sound with reproduction precision for best intelligibility of speech and excellent sound
- ▲ Mono/Stereo selection switch
- ▲ Noise-compensated microphone with adjustable gain
- ▲ Integrated dual volume control
- ▲ Ear cups in carbon design with metal bezels
- ▲ Rugged headband made of spring steel with moderate clamping force
- ▲ Light weight
- ▲ Modular construction for easy servicing
- ▲ Supplied with padded carrying case
- ▲ Five-year warranty
- ▲ Customized Manufaktur versions available on [www.beyerdynamic.com/aviation](http://www.beyerdynamic.com/aviation)



- DANR STATUS LED
- AUTO MUTE SWITCH AND LED
- DUAL VOLUME CONTROL
- BATTERY STATUS LED
- ON/OFF SWITCH
- EXTERNAL AUDIO AND CELL PHONE CONNECTOR

MADE IN GERMANY

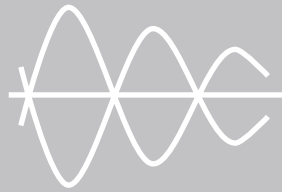
In addition to the standard version with two jack plugs for microphone and headphone, the HS 800 Digital Rotor for helicopters and the HS 800 Digital 6pin with 6-pin LEMO connector are provided.



HS 800 Digital    HS 800 Digital Rotor    HS 800 Digital 6pin

# DANR

## Digital Adaptive Noise Reduction



Active Noise Reduction on an analogue basis has existed for more than 20 years. The analogue feedback ANR (Active Noise Reduction) measures the ambient noise inside the ear cup section of the headphone and then reproduces a phase inverse counter noise which overlays the ambient noise, therefore creating a noise reduction. The performance of feedback-filters is limited as they cannot adapt to modified acoustic situations in situations such as a cockpit. In some cases, an unpleasant feeling of pressure can be created on the ear, or even a disturbing background noise can be heard.

### WHY DIGITAL?

The digital adaptive feedforward ANR measures the external background noise before it arrives at the ear. Through analysis of the noise, variable filters are then set and adapt automatically to changes in this sound.

Using this approach, the ambient noise inside the headset is reduced through an artificially produced but adaptive anti-noise. With a controlled measurement taken near the ear, fine adjustments can be made to improve the noise suppression through these specific rules again.

### THE NEW DANR IN THE HS 800 DIGITAL.

The HS 800 Digital uses newly developed DANR technology (Digital Adaptive Noise Reduction) that combines the advantages of feedback and feedforward techniques. The result is high control speed and the best possible accuracy. Intelligent digital algorithms analyze the noise level with highest precision and produce the exact opposite sound in the headset. The combination of adaptive broadband and narrowband digital filters with almost any curve form and provides an optimal noise suppression in all situations.

The DANR signal processor responds immediately and is flexible to changing noise. This can be an automatic activation of noise suppression during engine start or separate adjustment of frequency peaks, typical of engine noise at different speeds. For those who wear glasses, the audio leaks which can be caused by the frames on the ear pads are reliably compensated by DANR.

Music lovers will also appreciate that they can enjoy their favourite music with DANR undisturbed and in original quality. The HS 800 Digital offers maximum noise reduction at the highest sound level; the benefits are clearly heard!

#### Feedback-ANR

- ▲ Quick-reacting control
- ▲ Detects inside noise that really appears at the ear
- ▲ Effective at mid and high frequencies
- ▲ Suppresses wideband noise

#### Digital Adaptive Feedforward ANR

- ▲ High precision
- ▲ Detects outside noise before appearing at the ear
- ▲ Digital adaption to the noise
- ▲ Low self-noise
- ▲ Effective at low and mid frequencies
- ▲ Suppresses frequency peaks

#### HS 800 DANR (Digital Adaptive Noise Reduction)

- ▲ High precision
- ▲ Quick-reacting control
- ▲ Detects outside noise and inside noise
- ▲ Digital adaption to the noise
- ▲ Low self-noise
- ▲ Effective at low, mid, and high frequencies
- ▲ Suppresses frequency peaks and wideband noise

