

# hear back PRO

PERSONAL MONITOR MIXER SYSTEM

## ADAT Input/Output Card



SCAN  
CODE  
FOR USER  
GUIDE

### OVERVIEW

The Hear Back PRO 16-channel ADAT Input/output Card provides an industry standard method for sending and receiving 16 channels of digital audio. The ADAT card also offers backwards compatibility with the original 8-channel Hear Back system.

The ADAT protocol is a well established standard in the professional audio industry. ADAT uses the same physical TOS-Link optical connection that standard CD, DVD and Blu-ray players use. Although ADAT uses the same fiber optic cables and connectors as these standard consumer electronics devices, the ADAT audio format is different and incompatible. With ADAT, one single optical cable carries 8 channels of digital audio along with the digital synchronizing “clock” in one direction and can support sampling rates up to 48kHz.

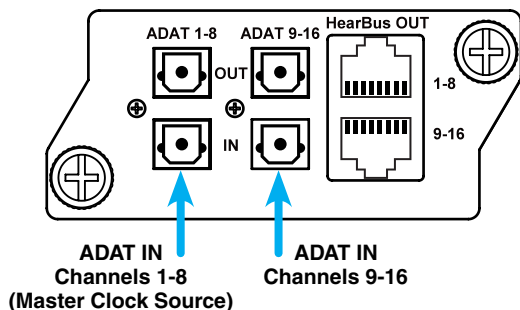
The ADAT card can be populated in Hear Back PRO Hub’s card slot 1 or card slot 3. If the card is in slot 1, it will input ADAT when the input select switch on the front of the hub is selected to “A.” Likewise, if the card is in slot 3, it will input ADAT when the input select switch is selected to “B.” Do not populate the ADAT card in slots 2 or 4. These slots are reserved for analog input cards, analog output cards, and mixer network cards.

### INPUT AND OUTPUT SETTINGS

#### INPUTS

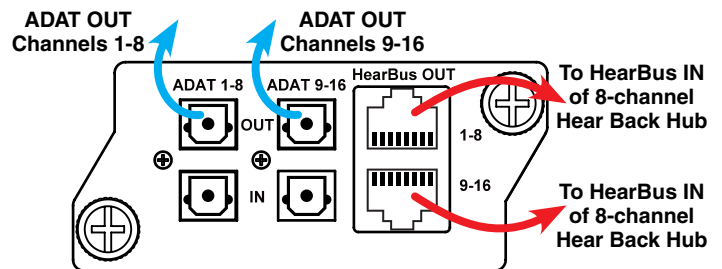
16 channels of digital audio input are connected to the card using two ADAT optical cables. On our card, these are the bottom two connectors. The left connector is for Channels 1 – 8 and the right connector is for Channels 9 – 16. Note that the left connector for 1 – 8 must be used because our system uses this connection as the master clock source. Also, to avoid digital pops and clicks, the 9 – 16 connection must be clock synchronized with the 1 – 8 connection. This is generally not an issue if both cables are connected to the same source.

The card supports both 44.1kHz and 48kHz sampling rates. Although some manufacturers will support higher sampling rates at the cost of reducing the number of channels (a technique called SMUX), our card does not support SMUX.



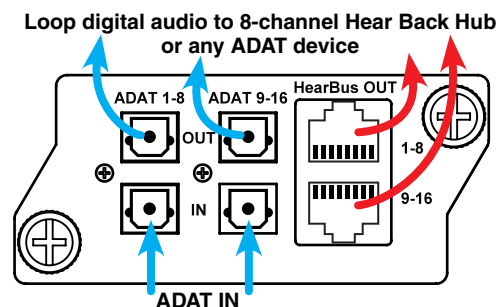
#### OUTPUTS

In addition to ADAT inputs, the card also has 16 channels of ADAT outputs using two ADAT optical cables. On our card, these are the top two connectors. The left connector is for Channels 1 – 8 and the right connector is for Channels 9 – 16. There are also two RJ45 connectors on the ADAT card labeled HearBus OUT 1 – 8 and 9 – 16. These connections are for sending digital audio to an original 8-channel Hear Back Hub’s HearBus IN port. Since there are two HearBus out connections on the ADAT card, two different original Hear Back Hubs can be connected, each with a separate set of 8 channels. This allows both the Hear Back PRO and the original Hear Back systems to be used in conjunction with each other.



NOTE: The HearBus connections are not Ethernet and are not compatible with the Hear Back PRO HBUS or any Hear Back PRO equipment. HearBus connections are only for connecting to the original Hear Back system. Only the HBUS connections on the Hear Back PRO Hub are used for connecting to other Hear Back PRO Hubs.

When the ADAT card is used as an input to the Hear Back PRO system, the ADAT and HearBus output connectors can be used to loop the digital audio out to an original Hear Back system or another ADAT device. When a different input such as HBUS or another card such as an Analog, AES/EBU, Dante, or Waves SoundGrid card is selected as the input, the ADAT card will continue to output digital audio. It will automatically perform sampling rate conversion if the sampling rate is higher than 48kHz. If the selected input is running at 88.2kHz or 176.4kHz, the ADAT card will down sample it to 44.1kHz. And if the selected input is running at 96kHz or 192kHz, the ADAT card will down sample it to 48kHz.



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Printed in U.S.A. ©2016  
FEB 2023