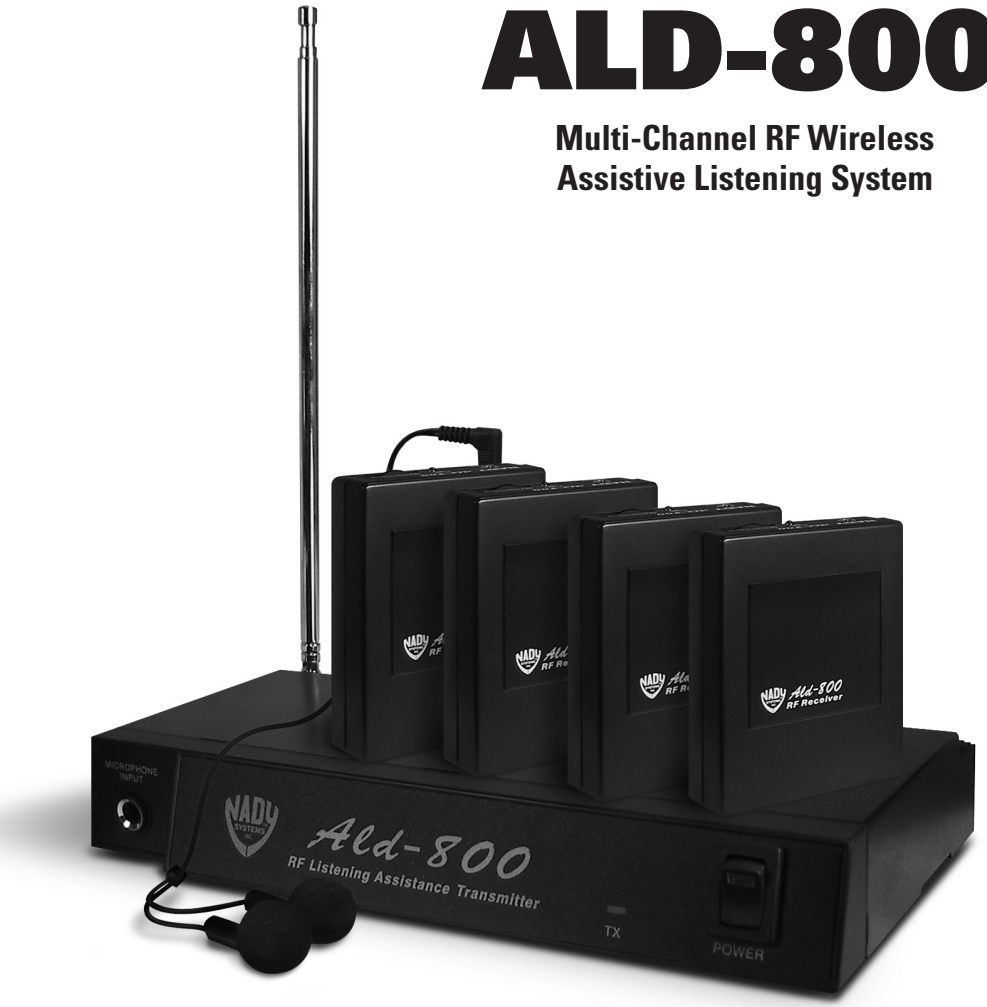
OWNER'S MANUAL

NADY SYSTEMS INC.

ALD-800

Multi-Channel RF Wireless Assistive Listening System



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Introduction

Thank you for choosing the Nady ALD-800 wireless RF personal listening assistance system, we know you will be very pleased with its performance and features. The Nady ALD-800 is the most cost-effective way to provide high quality listening assistance in compliance with the Americans with Disabilities Act (ADA), which requires public facilities such as movie theatres, etc. to make listening assistance systems available to their audiences. The system is designed to be very easy to use and requires no installation.

The ALD-800 is specifically designed to be installed quickly and easily by virtually anyone.

In addition to its ease of use, the ALD-800 provides outstanding sound quality. The system consists of one wireless transmitter and one or more pre-tuned portable wireless receivers. The transmitter features eight factory switchable channels; the receivers are single channel units that operate on one of eight channels in the 72-76 MHz band, with wide band modulation for quality audio.

Unlike infrared listening systems, the ALD-800 can be used outdoors and indoors in bright light without affecting performance.

The ALD-800 is perfect for virtually any application, from a small meeting room, or a mid-sized house of worship, to a large cinema. The ALD-800 provides high quality hearing assistance to any number of audience members, without seating restrictions.

The ALD-800 system has a wireless operating range of 300 feet. The transmitter connects to the line out or tape out from a venue's existing sound system, and broadcasts the audio as an FM radio signal. The transmitter can also be used with an optional microphone.

Audience members who desire listening assistance use a pocket size Nady ALD-800 receiver with adjustable volume control and ergonomic, high performance earphones. The ALD-800 system is expandable—one transmitter will provide audio to a limitless number of receivers.

ALD-800 Transmitter

Compact RF transmitter operating within the 72-76 MHz band designated for auditory assistance frequencies by the FCC.

- Eight factory switchable channels
- Input for line level audio
- Input for microphone
- Audio input gain control
- Automatic level control
- Extendible antenna
- AC-ALD800 9VDC regulated power supply adapter supplied
- LED power on and audio modulation indicators

Setting Up the Transmitter

Your Nady ALD-800 requires minimum installation. Simply place the transmitter on any flat surface, connect your mixing board to the transmitter's back panel input (See *Connecting Audio Input* below), connect the included power supply (as explained below), and the transmitter is ready to broadcast to any number of ALD-800 receivers operating on the same channel.

Powering the Transmitter

Connect the AC adapter provided into the **9V DC jack (1)** on the back panel of the transmitter. Plug the other end into an AC wall socket. Press **Power switch (2)**. The **Power On LED (3)** will light.

Antenna

Extend **Antenna (4)** fully and position 90 degrees from top of the transmitter.

Connecting Audio Input

The **Line In jack (5)** on the rear panel lets you connect the ALD-800 to your mixing console. This 1/4" mono phone jack accepts an unbalanced line level audio source at zero dBm nominal signal level. If your mixer has XLR outputs only, you will need an XLR-to-phone plug adapter, available from most electronics stores and music equipment stores.

Using a Microphone

The **Mic jack (7)** on the front panel allows wireless cueing of on stage performers.

IMPORTANT: *This 1/4" mono phone jack is designed for an electret condenser microphone, and 9V DC power is present at the input jack. If you wish to use a conventional dynamic microphone, at least 20 dB more gain is required, and a preamp should be used. If a preamp is used, be sure to have a blocking capacitor (1 mfd) between the preamp output and the E03 mic input. If a dynamic mic is plugged into the mic input by mistake, there should be no damage because the current is limited to 1.0 mA. If you have any questions, contact Nady Customer Service (510.652.2411) or your Nady dealer.*

Audio Input Gain Adjustment

You can quickly adjust the transmitter to obtain optimum performance with the **Input Gain control (8)**. The audio modulation indicator LED, marked **TX (6)** will increase in brightness as the control is turned clockwise, and decrease in brightness as the control is turned counterclockwise. When the "TX" LED is flashing during transmission, the transmitter is broadcasting properly. (If the LED stays off continuously or barely flashes at all, the input gain needs to be increased. If the LED stays on continuously and does not flash during modulation, the input is overloading and needs to be decreased.) You will also need to test the transmitter in use with an ALD-800 receiver. This procedure is easy to do, and is explained in the receiver instructions, which follow.

Confirming Correct Installation

The transmitter's **TX LED (6)** will flash when a microphone or line level signal is broadcast by the transmitter. If "TX" does not flash, turn the audio input gain control clockwise. This will increase audio level and cause "TX" to flash along with the program source. When "TX" is flashing, the transmitter is broadcasting properly. Test the transmitter with an ALD-800 receiver. This procedure is explained in the receiver instructions.

Note: *For the best performance, and to minimize the possibility of interference from another source, we suggest you experiment to find the minimal height the antenna must be extended in order to perform well in your particular environment.*

Channel Selection

Channel selection is controlled by DIP-switches inside the transmitter. The system is preset at the factory.

Changing the channel can be done quickly by any qualified service technician. Contact your dealer or the Nady Customer Service Department for details.

Using More Than One ALD-800 System

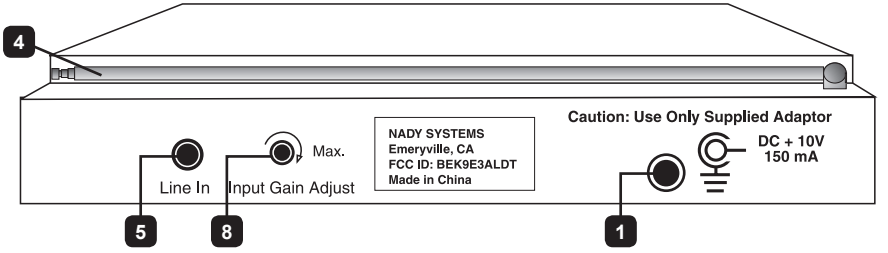
You may operate up to three ALD-800 systems in the same location. For multiple system operation, please observe:

- If operating two ALD-800 transmitters in the same location, use Ch. AA and HH (or GG).
- If operating three ALD-800 transmitters in the same location, use Ch. AA, EE and HH (or GG).

Locate the transmitters ten feet or more away from the performers wearing ALD-800 receivers.

ALD-800 Transmitter (Front Panel)

ALD-800 Transmitter (Rear Panel)



ALD-800 Receiver Operating Instructions

Pocket-sized RF receiver for personal listening assistance.

- Any number of ALD-800 receivers can be used with a single ALD-800T transmitter
- Ultra compact and lightweight
- Preset to one of eight auditory assistance channels
- Provides up to 130 dB SPL for hearing assistance
- Volume control adjust
- Antenna integral with earphone cord
- Mini binaural EB-800 earbud earphones included
- LED "power on" indicator
- Accepts standard 9V alkaline battery

Powering The Receiver

Install a 9V battery in **Battery Compartment (1)**, observing polarity. To preserve battery life, always turn the ALD-800 receiver off when it is not in use. When the sound becomes weak or distorted, replace the battery. The number of hours of operation per battery is as follows: carbon zinc type battery: 10-12 hours; alkaline battery (recommended): 17-20 hours.

Channel Selection

Your receiver is pre-tuned at the factory to the same channel as your transmitter. Should you wish to have your transmitter channel changed, as explained in the *Transmitter Operating Instructions* section of this manual, you must also have your receiver(s) retuned as well. Contact the Nady Customer Service Department for details.

Using the ALD-800 Earphones

Plug the included earphones into the **Earphone jack (2)** on top of the receiver. The earpads can be ordered separately, and since they cost very little, you may wish to dispose of them after use. However, the earpads can be replaced and reused after being washed in a mild detergent, rinsed and air dried.

Operating the Receiver

While wearing your earphones, stand near the ALD-800 transmitter. Turn the receiver on by rotating the **Off/On/Volume wheel (3)**. The **Power On indicator (4)** will go on. (To turn the receiver off, rotate the Off/On/Volume wheel until it clicks, and the "Power On" indicator will go out.) Listen for your program source, and adjust receiver volume to a comfortable listening level.

Note: *A slight buzzing may be heard if the receiver is used within six feet of the transmitter. This is normal and does not affect performance. For best performance, keep the receiver and the transmitter at least ten feet apart.*

Adjusting Earphones Volume

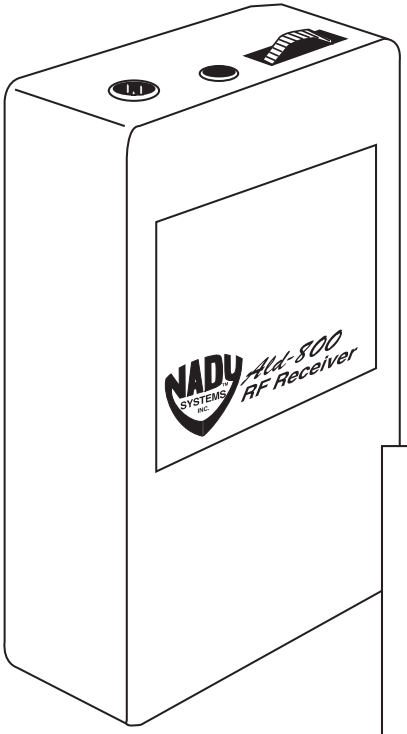
Listen for your program source, and adjust receiver volume to a comfortable listening level.

Note: *A slight hum may be heard if the receiver is used within six feet of the transmitter. This is normal and does not affect performance.*

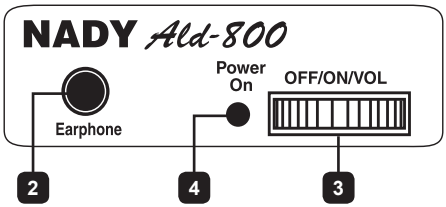
Testing Receiver Range

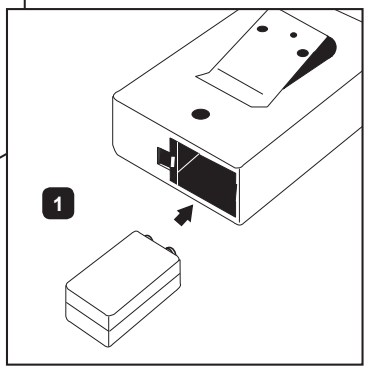
Wearing your receiver and earphones, walk around your seating area and listen for audio quality. In certain areas of the room the audio may disappear or "drop out." This is a normal occurrence whenever radio signals are transmitted inside a building. If you step away from the "drop out" zone, the audio will return.

ALD-800 Receiver (Front Panel)



ALD-800 Receiver (Top Panel)





Architects and Engineering Specifications

ALD-800 Transmitter

The transmitter operates on the 72-76 MHz auditory assistance frequencies. Transmitted field strength shall not exceed 8000 µV/m at 30 meters. The operating frequency is factory selectable to eight different channels by means of an internal switch.

Maximum FM deviation should not exceed 75 KHz. Transmitter signal pre-emphasis is 75 µS. Frequency stability is controlled by a phase locked loop synthesizer with crystal reference and accurate within ±.005% over 0-50 degrees C. The transmitter provides a permanently mounted telescoping whip antenna.

The FCC approved transmitter is powered by a UL and CSA listed AC wall transformer providing 9V DC input to the transmitter via a 3.5mm DC jack. The transmitter includes a 1/4" line-in jack, mounted on the rear panel, and 1/4" electret condenser microphone jack with 9V DC power (at 1.0 mA), mounted on the front panel. Also included, is an adjustable audio level control and a red LED "Power On" indicator. The model number is ALD-800.

ALD-800 Receiver

The receiver operates on a single frequency in the 72-76 MHz auditory assistance band. Frequency stability is controlled by a phase locked loop synthesizer with crystal reference and accurate within ±.005% over 0-50 degrees C. The receiver de-emphasis is 75 µS. The receiver provides a 3.5 mm headphone output jack mounted on the top panel.

The receiver is powered by a 9V alkaline battery. The receiver has an Off/On/Volume control mounted on the top panel, LED lamp to indicate battery strength, and an antenna shall be integral to the earphone/ earbud cord. The receiver model number is ALD-800.

Specifications

OVERALL SYSTEM PERFORMANCE

Frequency Response	100 Hz-15KHz ± 3 dB
Signa-to-Noise Ratio	60 dB
Total Harmonic Distortion	< 0.5%
RF Carrier Frequencies	Eight channels between 72-76 MHz Channel AA:72.1, BB: 72.3, CC: 72.5, DD: 72.7, EE: 72.9, FF:75.5, GG: 75.7, HH: 75.9
Frequency Stability	Better than .005%
Modulation	FM ± 75 KHz max
Operating Range	Up to 300 feet line-of-sight

ALD-800 TRANSMITTER

Mic Input	Connector: 1/4" phone jack. Impedance: low impedance, unbalanced, with 9V DC at 1 mA for condenser mic.
Line Input	Connector: 1/4" phone jack. Impedance: 100 K Ω, unbalanced.
Power Output	80,000 µV @ 3 meters
Controls	Power on/off, audio input gain adjust
Indicators	Power On LED, Audio Modulation LED
Antenna	Permanently mounted telescoping whip
Power Requirement	9 VDC, regulated @200 mA, AC-ALD800 adapter provided
Dimensions	1.25" H, 8.25" W, 4.25" D (3.175 x 20.9 x 10.8 cm)
Weight	18.2 oz. (500 g.)

ALD-800 RECEIVER

Controls	Combination volume/on-off wheel
Audio Output	250 mW max into 16 ohms
Connectors	3.5 mm mini jack for earphone output
Earphones	Mini binaural earbuds
Antenna	Integral with earphone cord
Indicators	LED power on indicator
Sensitivity	2 µV for 12 dB Sinad with squelch defeated Squelches at 10 µV for min. 50 dB S-N ratio
Mute Threshold	8-10 µV
Power Requirement	9V alkaline
Battery Life	17-20 hours w/alkaline battery
Dimensions	3.35" H, 2.75" W, .75" D (8.5 x 6.5 x 2.25 cm)
Weight	2.65 oz. w/out battery (73 g.)

Specifications subject to change at any time without prior notice for purposes of product improvement

Service Information

In the U.S. If you are experiencing operational problems with your system, please refer to the Support page at www.nady.com for assistance. Should your wireless system require service, please contact the Nady Service Department at (510) 652-2411 to obtain a Return Authorization (R/A) Number and service quote (if out of warranty). Make sure the R/A Number is clearly marked on the outside of the package that you are returning.

If your unit is out of warranty, please enclose a cashier's check or money order (or pay by credit card) per instructions by the Nady Service Department. Ship your unit prepaid to: Nady Systems, Service Department, 6701 Shellmound Street, Emeryville, CA 94608. Include a brief description of the problem you are experiencing. For service of a unit under warranty, please follow the instructions in the following section.

Outside the U.S. For service or warranty matters please contact the Nady distributor in your country through the dealer/store from which you purchased this product.

Do not attempt to service this unit yourself as it can be dangerous and will also void the warranty.

One-Year Limited Warranty

Nady Systems, Inc. warrants to the original consumer purchaser (U.S.A only) that the unit is free from any defects in material or workmanship for a period of one year from the date of original retail purchase. If any such defect is discovered within the warranty period, Nady Systems, Inc. will repair or replace the unit free of charge, subject to verification of the defect or malfunction upon return to Nady Systems. Please do not return your Nady product to the store where it was purchased as Nady Systems handles your warranty service directly. Communication with our Service Department is the most efficient means of servicing your unit and we are dedicated to keeping you a satisfied customer.

To the extent permitted by law, any applicable implied warranties, including warranties of merchantability and fitness are hereby limited to one year from the date of purchase. Consequential or incidental damages resulting from a breach of any applicable express or implied warranties are hereby excluded. This warranty is in lieu of all other agreements and warranties, general or special, express or implied and no representative or person including a Nady dealer, agent, or employee is authorized to assume for us any other liability in connection with the sale or use of this Nady Systems' product.

Whereas some states do not allow limitations on how long implied warranties last, and do not allow exclusion of incidental or consequential damages, the above limitations and exclusions may not apply to you. This warranty gives you specific legal rights and you may also have other rights which may vary from state to state.

This warranty is subject to the following conditions:

1) This system must have been purchased from an authorized Nady dealer and all warranty service must be performed by Nady's service department. Any service not performed by Nady will automatically void this warranty.

2) Items not covered: physical damage resulting from improper handling of the unit in transit from the factory by the shipper (Nady Systems is not responsible for such damage and all such claims must be made against the shipping company by the consignee); defects caused by normal wear of the product (expendable parts are typically connectors, cables, potentiometers, switches and similar components); damage or defects caused by abuse, neglect, accident, failure to connect or operate the unit in any way that does not comply with applicable technical or safety regulations, or improper repair, excessive heat or humidity, alteration or unreasonable use of the unit, causing cracks, broken cases/housings or parts; damage caused by leaking batteries; finish or appearance items; items damaged in shipment en route to Nady Systems, Inc. for repair. The warranty is null and void if any Nady serial number has been removed or defaced.

How To Obtain Service:

1) If factory service is required, please contact our Service Department at (510) 652-2411 for a return authorization (R/A) number. Make sure the R/A number is clearly marked on the outside of your package. (Please note: if an R/A number is not included, our Shipping Department cannot accept your package.)

2) Send the unit back to Nady Systems, 6701 Shellmound Street, Emeryville, CA, 94608, freight pre-paid. You must include proof of date and place of purchase (i.e., photocopy of your bill of sale) or Nady cannot be responsible for repair or replacement. Nady Systems, Inc. will not repair, nor be held responsible, for any units returned without proper identification, return address, and R/A number clearly marked on the package.

3) Per the above, Nady will perform all warranty service and return the unit to you at no charge. Nady Systems will inform the buyer if product sent in does not meet the terms of this warranty and will provide a quote for fixing the unit and/or shipping it back exclusively at the buyer's expense.

6701 Shellmound Street | Emeryville, CA USA 94608
T 510.652.2411 | **F** 510.652.5075 | **www.nady.com**