

OWNER'S MANUAL



# DKW-8U

Single Channel UHF  
Wireless System



# Contents

Introduction .....	2
Using this Manual.....	2
System Features .....	3
DKW-8U Receiver .....	4
HT-8U Handheld Mic Transmitter .....	6
BT-8U Bodypack Transmitter .....	7
Specifications .....	10
Warranty .....	11
Service Information .....	12

## Introduction

Thank you for choosing the Nady DKW-8U wireless system, we know you will be very pleased with its performance and features. The Nady DKW-8U is the perfect entry-level professional wireless, and delivers clear, transparent audio for a variety of singing and speech and wireless instrument applications. The DKW-8U is loaded with top professional performance and is the best price value available in UHF wireless systems.

## Using This Manual

This booklet provides information regarding the use of the DKW-8U wireless system and includes a description of features and a step-by-step guide to operation of the unit. This manual should answer any questions you may have about the operation and servicing of your DKW-8U.

# System Features

## DKW-8U Receiver

- Unprecedented value in a single-channel UHF wireless mic/instrument system with interference-free operation in any application or locale on select UHF frequencies on separate bands, 902-928MHz and 944-952MHz
- Compact, simple set up to operate— simply plug in instead of your wired microphones or instrument cable
- All the advantages and freedom of wireless operation without cumbersome cords
- Excellent high fidelity audio—perfect for public speaking, karaoke/recreational singers, guitarists, DJ's, and many other applications
- Nady's proprietary companding circuitry for an industry best 120dB Dynamic Range, and the clearest, most natural sound available
- 150+ feet typical operating range— up to 300+ feet line-of-sight
- POWER, SIGNAL, AF LED status indicators, adjustable audio output level for optimal sound and 1/4" phone jack output for easy connection to sound system
- Externally powered by DC power adapter (included)

## HT-8U Handheld Microphone Transmitter

- Features the Nady DM -10D unidirectional neodymium dynamic cartridge for optimum true sound, maximum feedback rejection and minimal handling noise
- OFF/STANDBY/ON switch allows convenient audio muting while transmitter "ON"
- Status LED indicator flashes once for unit "ON"; lights steady for low battery alert
- Two AA alkaline or NiMH battery operation

## BT-8U Bodypack Transmitter

- Choice of instrument (GT)/headworn(HM)/ lavalier(LT) microphone operating modes in a single bodypack transmitter
- OFF/STANDBY/ON switch allows convenient audio muting while transmitter "ON"
- Status LED indicator flashes once for unit "ON"; lights steady for low battery alert
- Locking 3.5mm mini-jack provides secure connection for removable microphone or instrument cable
- Easily accessible input level adjust control for optimum sound (HM/LT operating modes only)
- Single 9V alkaline or NiMH battery operation

# DKW-8U Receiver

## 1. Receiver Placement

This unit is designed for desktop use and can be placed on any flat surface that is secure. Do not place, however, on amplifiers or other equipment that can get hot in operation. This unit is not designed for rackmounting.

## 2. Powering the Receiver

Plug the **14V/0.4A DC ADAPTER (1)** provided into the **DC IN jack (2)** on the back of the receiver. Then plug the power supply into an AC outlet. **The POWER LED (3)** will now light and the receiver is operational.

## 3. Antenna

The DKW-8U receiver is supplied with an attached **FOLDING ANTENNA (4)**. This should be extended fully to obtain maximum range. Optimal antenna position is 45 degrees from the receiver. For maximum range, it is always best to maintain a line of sight (no obstructions) between the receiver and the transmitter antenna at all times whenever possible.

## 4. Mute (Squelch)

The DKW-8U has a preset mute (Squelch) internally for maximum range and performance. There is no need to adjust this. In normal operation, the **SIGNAL LED (5)** should be lit when the transmitter is transmitted. However, when the signal LED extinguishes, the transmitter is out of range for that given location, and the user should move closer to the receiver to re-establish the radio link.

## 5. Connecting the Audio Output

The DKW-8U receiver provides with an adjustable 1/4" line level **AUDIO OUT jack (6)**.

*(Note: As when making any connection, make sure the amplifier or mixing board volume is at the minimum level before plugging in the receiver to avoid possible sound system damage.)*

## Microphone Connection

(Using the HT-8U handheld microphone or the BT-8U transmitter with either a headworn or lavalier microphone transmitter)

For microphone use, the 1/4" line level **AUDIO OUT** can be used. Plug one end of a 1/4" audio cable into the **AUDIO OUT JACK (6)** located in the back of the receiver. Plug the other audio cable end to you mixing board input. Make sure the phantom power on your mixing board is turned off and the volume in turned down when making the audio connections. Start the receiver **VOLUME (7)** at MINIMUM and adjust until the volume level is optimal.

## Instrument Connection

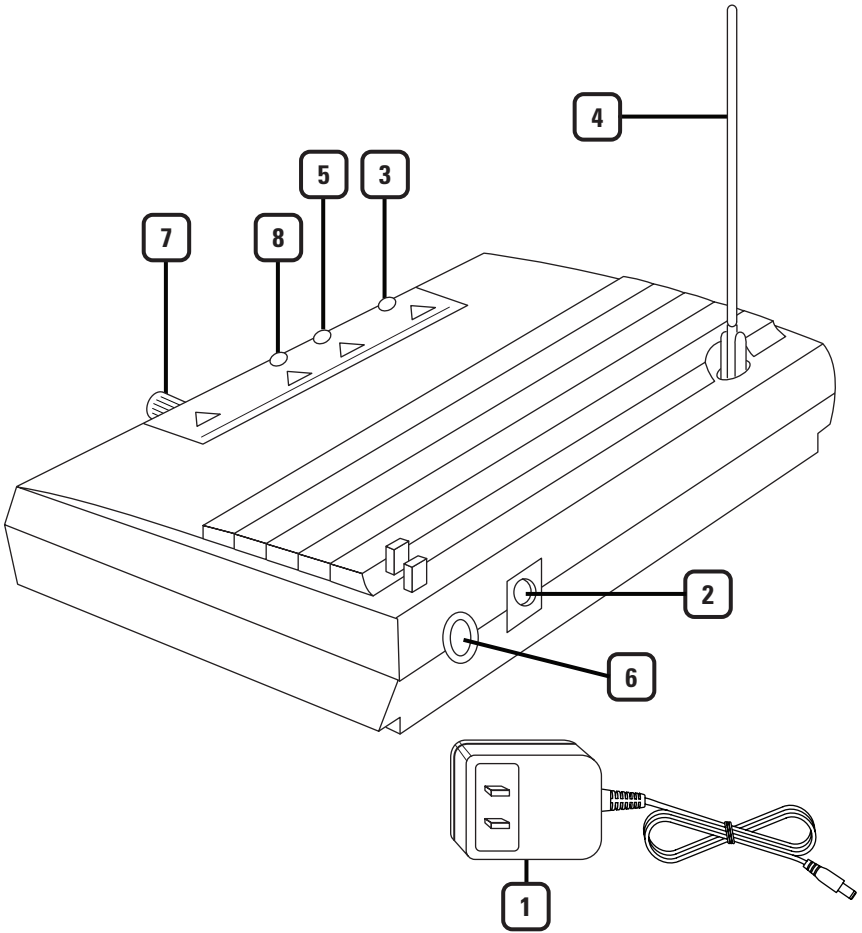
To use the 1/4" line level **AUDIO OUT JACK (6)** for instrument use, follow the instructions for the Microphone Connection (above), except start the receiver **VOLUME (7)** at 1/2 MAX and adjust until the volume level is optimal.

*(Note: 1:1 with a directly connected cord from the instrument to the amp is with the volume about 3/4 MAX, and MAX volume from the receiver will be about 4dB higher than 1:1. If the volume control is set too high, you may overload your mixer or amp.)*

## 6. AF LED Display

The DKW-8U receiver is equipped with an **AF LED DISPLAY (8)**. The LED lights whenever an audio signal is being transmitted from the transmitter.

*(Note: The AF LED Display is not a peak level indicator so it can light continuously during audio signal input to the transmitter.)*



# HT-8U Handheld Mic Transmitter

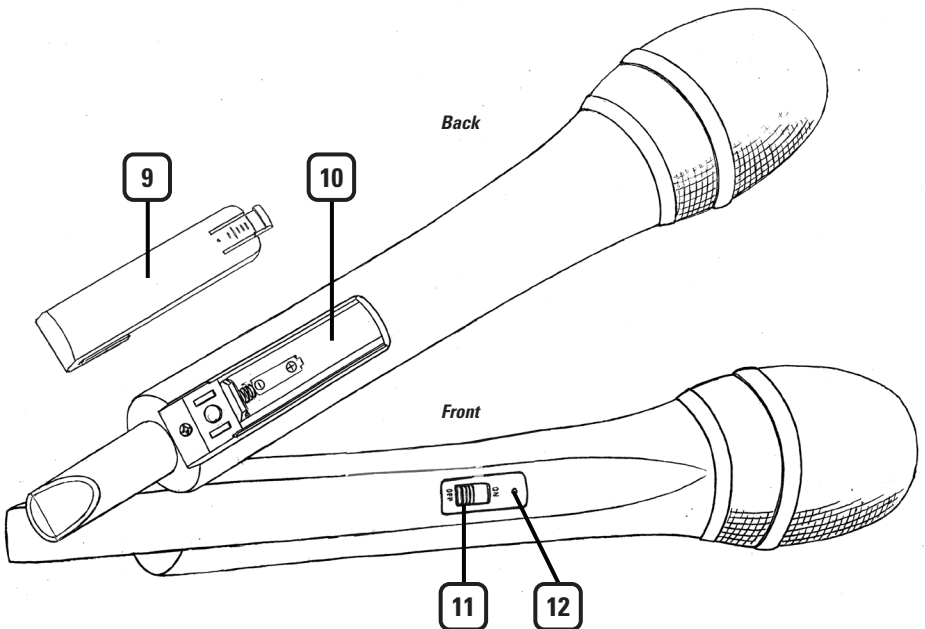
1. Release the **BATTERY COVER (9)** by pressing the locking tab and slide down as per the arrow, exposing the **BATTERY HOLDER (10)**. Insert two fresh AA alkaline or NiMH batteries, observing the correct polarity as marked, and slide the battery cover back on to the microphone. Make sure the cover is closed completely. Fresh alkaline batteries can last up to 10 hours in use, but in order to ensure optimum performance, it is recommended that you replace the battery after every 6-8 hours of use. NiMH batteries should be replaced with fresh ones recharged fully (with separate charger, not supplied, and as per its charging instructions) whenever low or dead battery status is indicated as per the following.

2. Turn on the HT-8U by sliding the **OFF/STANDBY/ON SWITCH (11)** to the STANDBY position first (transmitter on, audio muted) or the ON position (transmitter and audio

both on). The **BATTERY INDICATOR LED (12)** will give a single quick flash, indicating usable battery strength. In the case of a dead or low battery, the LED will either not go on at all or will stay on continuously, indicating that the batteries should be replaced with fresh ones. To preserve battery life, turn the transmitter off when not in use.

3. The microphone is now ready to use. The **SIGNAL LED (5)** on the DKW-8U receiver should now be lit, indicating a received signal from the transmitter. When ready to speak, slide the **OFF/STANDBY/ON SWITCH (11)** to the ON position. Adjust the volume of the receiver as per the Connecting the Audio Output of the above DKW-8U receiver instructions.

*[Note: Observe care in selecting P.A. volume, transmitter location and speaker placement so that acoustic feedback (howling or screeching) will be avoided.]*



# BT-8U Bodypack Mic Transmitter

1. Snap open the **BATTERY DOOR (13)** and insert a fresh 9V alkaline or NiMH battery into the **BATTERY COMPARTMENT (14)** observing the correct polarity. Close the battery door to its original position and completely cover the battery. Fresh alkaline batteries can last up to 10 hours in use, but in order to ensure optimum performance, it is recommended that the battery be replaced after 6-8 hours of use. A NiMH battery should be replaced with another recharged fully (with separate charger, not supplied, and as per its charging instructions) whenever low or dead battery status is indicated as per the following.

2. Selecting **Audio Input Operating Mode**: The BT-8U is equipped with two **INPUT SELECTOR SWITCHES (15)** located under the cover on the circuit board for selecting the type of audio input you will be supplying to the transmitter. Select from the choice of three positions: INSTRUMENT (for guitar, bass, etc.), HEADWORN MIC, and LAVALIER MIC (Condenser Microphones).

*(Note: Use only the input audio source as per the input selected with the internal AUDIO INPUT SELECTOR SWITCHES (15) or the audio will not be optimal—a muddy or distorted sound may result.)*

There are two switches with selectable positions GT, HM, LT together at the same time.

To select inputs: (see chart on page 9)

- A. Instrument:** Set both switches to GT
- B. Headworn Mic:** Set both switches to HM
- C. Lavalier Mic:** Set both switches to LT

3. Connecting for **Selected Input**: The BT-8U is provided with a 3.5 mm **LOCKING JACK (16)** for connecting the audio input selected. Connect either the **INSTRUMENT CORD (17)** or the **HEADWORN MIC (18)** or **LAVALIER MIC CORD (19)** as desired, according to the input

selected. To secure the connection, turn the slip ring on the plug clock wise to thread it on the jack. To unplug, reverse the process. Slip the transmitter into a pocket or **CLIP (20)** it on to your clothes or instrument strap (if using the BT-8U as an instrument transmitter).

4. Turn on the BT-8U by sliding the **OFF/STANDBY/ON SWITCH (21)** to the STANDBY position (transmitter on, audio muted) or the ON position (transmitter and audio both on). The **BATTERY INDICATOR LED (22)** will give a single quick flash, indicating usable battery strength. In the case of a dead or low battery, the LED either will not go on at all or will stay on continuously, indicating that the battery should be replaced with a fresh one. To conserve battery life, turn unit off when not in use.

5. The BT-8U transmitter is now ready to use. The **SIGNAL LED (5)** on the DKW-8U receiver should now be lit, indicating a received signal from the transmitter. Adjust the volume of the receiver as per the Connecting the Audio Output of the above DKW-8U receiver instructions.

6. **Instrument Use:** Secure the connection from the **GT CABLE (17)** by turning the slip ring on the plug into the transmitter clockwise to thread it on the jack. To unplug, reverse the process. Plug the 1/4" phone plug into the instrument. When ready to play, slide the audio **OFF/STANDBY/ON SWITCH (21)** to either "STANDBY or ON" position. Adjust the volume of the receiver as per the Connecting the Audio Output of the above DKW-8U receiver instructions.

*(Note: The INPUT LEVEL CONTROL (23) is deactivated and not used when the BT-8U is in INSTRUMENT (GT) mode. Levels should be adjusted with the volume control of your instrument.)*

*(Note: Scratchy noises can sometimes occur when some electric guitars with dirty pots or connections are used with any wireless system. Therefore, the supplied INSTRUMENT CORD (17) has a factory-installed capacitor inside the 1/4" plug. This capacitor provides first order filtering of the RF signal from the cord into the guitar and eliminates virtually all scratchy noises. Should your equipment still give you scratchy noises, we suggest these steps to eliminate them:*

1) Make sure all guitar volume and tone pots are clean and all contacts are solid—this is very important.

2) A 47pf capacitor soldered across the hot to ground terminals of the guitar's volume and tone pots will provide extra filtering.)

7. **Microphone use** (with either a lavalier or headworn microphone): Secure the connection from the **LAVALIER (18)** or **HEADWORN MIC CORD (19)** by turning the slip ring on the plug into the transmitter clockwise to thread it on to the jack. To unplug, reverse the process. To use the lavalier mic, attach it at chest level. Do not place it too close to the mouth—a distance of about six inches usually works best. To use the headworn mic, place it on the head and adjust the boom so that the mic is about one inch to the side of the front of the mouth. When ready to speak, slide the **OFF/STANDBY/ON SWITCH (21)** to the either "STANDBY or ON" position.

Adjust the volume of the receiver as per the Connecting the Audio Output above DKW-8U receiver instruction.

*(Note: Observe care in selecting P.A. volume, transmitter location and speaker placement so that acoustic feedback (howling and screeching) will be avoided. Please also note the pickup pattern characteristics of the microphone selected. Omnidirectional mics pick up sound equally from all directions, and are prone to feedback if not used carefully. Unidirectional mics are more resistant to feedback, but pick up sound sources best that are directly in front of the mic. Also, mics that are farther from the sound source, such as lavalieres, require more acoustic gain and thus are also more prone to feedback than close-source mics such as handheld or headworn models that are used close to the mouth).*

8. For optimum performance, an **INPUT LEVEL CONTROL (23)** is provided. Adjust the gain by turning the control with a small screw driver. For lavalier mic use, it is recommended that the level be set at about 1/2 maximum. For headworn mic use, it may be advisable to turn the gain down somewhat, depending on the volume levels expected. In either application, experiment and set for maximum possible gain without audible distortion on the high level peaks.

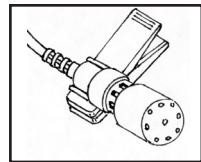
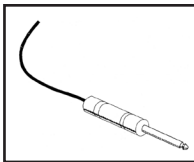
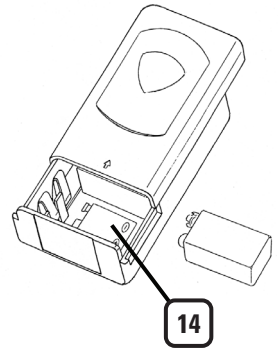
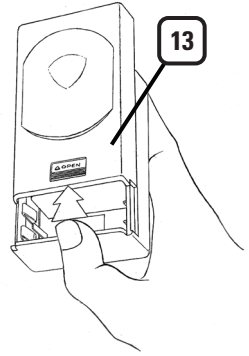
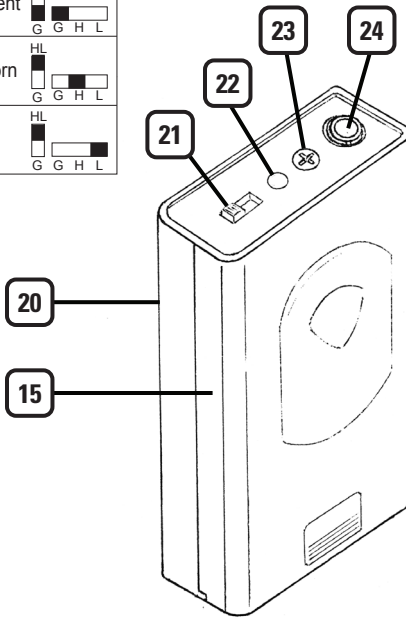
*(Note: Turning down the gain too much can compromise the signal-to-noise and it is not recommended.)*

9. The DKW-8U receiver is equipped with an **AF LED DISPLAY (8)**. The LED lights whenever an audio signal is being transmitted from the transmitter.

*(Note: The AF LED Display is not a peak level indicator so it can light continuously during audio signal input to the transmitter.)*

**INPUT SELECTOR SWITCHES**

Instrument	HL			
	G	G	H	L
Headworn	HL			
	G	G	H	L
Lavalier	HL			
	G	G	H	L



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# Specifications

## DKW-8U OVERALL SYSTEM PERFORMANCE

<b>Frequency Response</b>	50 Hz - 16 KHz, - 3 dB
<b>Dynamic Range</b>	120 dB
<b>Total Harmonic Distortion</b>	<1%
<b>RF Carrier Frequency Range</b>	UHF, choice of single frequencies on separate bands, 902-928MHz and 944-952MHz
<b>Frequency Stability</b>	+/- 0.005%, crystal controlled
<b>Modulation</b>	FM +/-20KHz normal
<b>Operating Range</b>	Up to 250 ft. typical (depending on site conditions); up to 500+ feet optimum line-of-sight

## RECEIVER

<b>Reception Mode</b>	Mono antenna reception
<b>Squelch</b>	Fixed
<b>Controls</b>	Volume Control
<b>Connectors</b>	DC In: (2.1mm barrel), Unbalanced Out :1/4" (6.3mm) jack
<b>LED Indicators</b>	Power ON, Signal, AF LEDs
<b>Unwanted Signal Rejection</b>	60dB image and spurious
<b>Power Requirements</b>	DC 14V @ 400 mA, DC adapter included
<b>Dimensions (Max.)</b>	6.88" x 4.0" x 1.5" (17.5 x 10.2 x 3.8 cm)
<b>Weight</b>	7.6 oz (0.22 kg)
<b>Antenna</b>	4" (9.5 cm), Single section telescopic

## TRANSMITTERS

<b>Audio Inputs</b>	
<b>BT-8U Bodypack</b>	3.5mm locking mini-jack, internally switchable inputs: instrument, headworn mic, or lavalier mic
<b>HT-8U Handheld</b>	Integral Nady DM-10D neodymium dynamic cartridge
<b>Controls</b>	
<b>BT-8U</b>	ON/STANDBY/OFF, INPUT LEVEL CONTROL, internal GT/HM/LT switches
<b>HT-8U</b>	ON/STANDBY/OFF
<b>RF Power Out</b>	20mW normal (50mW Maximum allowed by FCC)
<b>Harmonic and Spurs</b>	< -50 dB
<b>Antennas HT-8U/BT-8U</b>	Internal antennas
<b>Indicators HT-8U/BT-8U</b>	Single LED, flash once "ON", LOW BAT "Steady ON"
<b>Battery</b>	
<b>HT-8U</b>	2xAA Alkaline or NiMH batteries
<b>BT-8U</b>	Single 9V Alkaline or NiMH battery
<b>Battery Life</b>	8-10 Hours (Alkaline)
<b>Dimensions</b>	
<b>BT-8U Bodypack</b>	4.25" x 2.5" x 1.0" (10.8 cm x 6.4 cm x 2.5 cm)
<b>HT-8U Handheld</b>	10.5" x 1.875" (26.7 cm x 4.8 cm)
<b>Weight</b>	
<b>BT-8U Bodypack</b>	3.1 oz (88 g) without battery
<b>HT-8U Handheld</b>	7.5 oz (213 g) without battery

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

# 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.

# 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](http://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.**



6701 Shellmound Street | Emeryville, CA USA 94608  
T 510.652.2411 | F 510.652.5075 | [www.nady.com](http://www.nady.com)