



U-33B

UHF Bass Wireless Microphone System

DigiTRU Diversity™

Nady Wireless Systems are type accepted under FCC rules parts 90, 74 and 15. The device complies with RSS-210 of Industry & Science Canada. Operation is subject to the following two conditions: (1) this device may not cause harmful interference and (2) this device must accept any interference received, including interference that may cause undesired operation.



NADY SYSTEMS, INC.

6701 Shellmound Street • Emeryville, CA 94608 USA
Tel: 510/652-2411 • Fax: 510/652-5075
www.nady.com

OWNER'S MANUAL

SERVICE

(U.S.) Should your Nady Wireless Microphone System require service, please contact the Nady Service Department via telephone at (510) 652-2411 or e-mail to service@nady.com for a Return Authorization (R/A) Number and a service quote (if out of warranty). Make sure the R/A Number is clearly marked on the outside of the package and enclose a cashier's check or money order (if not prepaid with a credit card). Ship the unit prepaid to: Nady Systems, Inc., Service Department, 6701 Shellmound Street, Emeryville, CA 94608. Include a brief description of the problems you are experiencing.

The warranty card enclosed with this system contains additional valuable warranty and service information. Keep it in a safe place for future possible reference. Do not attempt to service this unit yourself as it will void the warranty.

(International) For service, please contact the Nady distributor in your country through the dealer from whom you purchased this product.

SPECIFICATIONS

U-33B OVERALL SYSTEM PERFORMANCE

Frequency Response	30 Hz - 18 KHz, - 3 dB
Dynamic Range	120 dB
Total Harmonic Distortion	< 0.6%
RF Carrier Frequency Range	UHF, choice of single frequencies from 470-500 MHz
Frequency Stability	±0.005%, crystal controlled
Modulation	FM (F3E), ±10KHz normal, ±40KHz max
Operating Range	Up to 250 ft. typical (depending on site conditions); up to 500+ feet optimum line-of-sight

U-33B BASS RECEIVER

Reception Mode	DigiTRU Diversity™ (Dual Antenna)
Squelch	External Control
Controls	Power ON/OFF, Volume Control, Squelch (Mute) Adjust
Connectors	DC in, 1/4" (6.3 mm) unbalanced phone jack (225 mV/ no load), XLR balanced output (±20 mV/600 Ohm load) +8dB @ 100Hz
Bass Booster Control	
LED Indicators	Power ON, Diversity A/B, Audio Level and Peak
Unwanted Signal Rejection	60dB image and spurious
Power Requirements	DC 18V @ 250mA, AC/DC adapter included
Dimensions (Max.)	1.75" x 7.5" x 8.1" (4.4 x 19 x 20.7 cm)
Weight	1.6 lbs (.73 kg)
Antenna	11.2" (28.5 cm), dual folding antennas

UB-33B BASS TRANSMITTER

Audio Inputs	3.5mm instrument locking mini-jack
Controls	POWER, AUDIO ON/OFF
LED Indicator	Bi-color, Unit "ON" (green), Low Battery Alert (orange)
RF Power Out	50mW nominal (maximum allowed by FCC)
Harmonic & Spurious Emissions	< -50 dB
Battery	AAA Alkaline (2x)
Battery Life	4-5 Hours
Dimensions	3.25" x 2.187" x 1" (8.25 cm x 5.53 cm x 2.54 cm)
Weight	2.25 oz (0.064 kg) without battery

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INTRODUCTION

Thank you for purchasing a Nady U-33B Bass Wireless Microphone System and congratulations on your choice. The U-33B is loaded with top professional operating features and is the best performance and price value available in UHF diversity bass wireless systems.

USING THIS MANUAL

This booklet gives instructions for the operation of the U-33B UHF wireless system. Please read the instructions for your system completely before operating unit.

This manual will first list the features of the U-33B and then will take you step by step to show you how to operate your new system. Included in this manual are system specifications and servicing information.

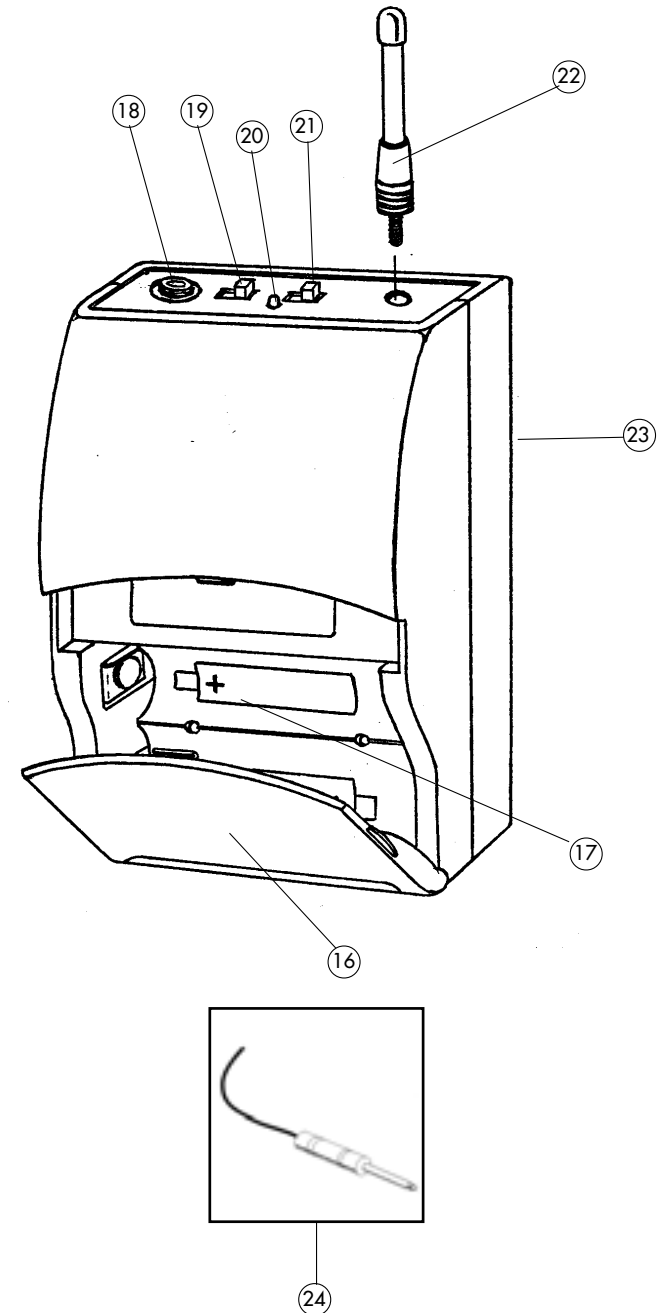
SYSTEM FEATURES

U-33B BASS RECEIVER

- Specially customized for use with bass guitar transmitter and features Enhanced Headroom™ for maximized possible clarity and distortion-free audio
- Unique user adjustable Bass Boost™ control for dialing in the exact desired bass punch and presence missing in standard wireless
- Nady's proprietary companding circuitry for an industry best 120dB Dynamic Range, and clearest, most natural sound available
- Clear channel operation on the wide open, unclustered UHF band for interference-free performance in any application or locale
- DigiTRU Diversity™ for optimum range and dropout protection
- A-B antenna LED indicators
- 5-LED AF display for monitoring audio level
- Unbalanced 1/4" and balanced XLR outputs (for bass amp or direct mixer feeds, or both). Volume control for unbalanced line output. Fixed level for XLR output
- External Mute (squelch) adjust control
- Half-rack receiver design with folding front panel dual one section telescopic antennas
- Unique snap-out panel locking tabs for half-rack single receiver or full rack (side-by-side) dual receivers mounting with option accessory
- Externally powered by AC/DC power adaptor

UB-33B BASS TRANSMITTER

- Compact small sized
- Removable rubber ducky antenna
- Customized specially for use with U-33B bass guitar receiver. Features enhanced Headroom™ for maximum possible clarity and distortion-free audio, even with high output active pickups
- Audio mute switch allows convenient audio muting with the transmitter "ON"
- Bi-color LED status indicator: "ON" (green), Low Battery Alert (Orange)
- Locking 3.5mm mini-jack provides secure connection for removable instrument cable
- Convenient, economical operation with two AAA Alkaline or NiMH batteries



UB-33B BASS WIRELESS TRANSMITTER

1. Open the hinged **BATTERY DOOR (16)** and insert 2 fresh AAA ALKALINE BATTERIES into the **BATTERY COMPARTMENT (17)**, observing the correct polarity. Fresh alkaline batteries can last up to 5 hours in use, but in order to ensure optimum performance, it is recommended that the batteries be replaced after 3-4 hours of use.
2. The UB-33B is provided with a **3.5 mm LOCKING JACK (18)** for connecting the audio input selected. Connect either the **INSTRUMENT CORD (24)**, to secure the connection, turn the slip ring on the plug clockwise to thread it on the jack. To unplug, reverse the process. Slip the transmitter into a pocket or **CLIP (23)** it onto your clothes or instrument strap.
3. Turn on the UB-33B by sliding the audio **AUDIO SWITCH (19)** to the OFF position first then slide the **POWER SWITCH (21)** to the ON position. The Bi-Color **LED indicator (20)** will stay on (GREEN), indicating usable battery strength and that the transmitter is on. In the case of dead or low batteries, the LED will either not go on at all or will stay on (ORANGE) continuously, indicating that the batteries should be replaced with fresh ones. To preserve battery life, turn the transmitter off when not in use. The **A or B Diversity LED indicators (13)** on the U-33 receiver should now be lit, indicating a received signal from the transmitter.

4. Instrument Use

Secure the connection from the **GT CABLE (24)** 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 SWITCH (19)** to "ON" position. Adjust the volume of the receiver as per the Audio Output Instrument Connection section of the above U-33B receiver instruction.

(Note: The UB-33B is supplied with a removable antenna. It should be operated with the supplied antenna all times. For optimum operating range, always maintain line-of-sight between the transmitter and the receiver whenever possible.)

U-33B RECEIVER

1. Rackmounting the Receiver

There are 2 options available for rackmounting the U-33B receiver: singly or side-by-side with another U-33B receiver.

- a. Single mounting: Remove the receiver **SIDE MOUNT CLIP (1)** from each side of the receiver (as shown) and slide in the optional **ERM-3 RACK EARS (2)**.
- b. Side-by-side double mounting: After removing the **SIDE MOUNT CLIPS (1)** from both U-33B receivers, join the two receivers with the **EJC-3 JOINING CLIP (3)** and attach the **ERM-33 RACK EARS (4)** as shown. *(Note: Do not mount the receiver in a rack directly above an amplifier or other source of high heat – this could degrade the performance of the U-33B. Always ensure adequate airflow and heat dissipation in any rack configuration.)*

2. Powering the Receiver

Plug the **18V AC/DC ADAPTER (5)** provided into the **DC INPUT JACK (9)** on the back of the receiver. Then plug the power supply into an AC outlet. *(Note: Any 18V DC source with 250mA capability can also be used.)* Press the **POWER SWITCH (11)** once to turn on the receiver. The **POWER ON LED (12)** will now light and the receiver is operational.

3. Antennas

The U-33B receiver is supplied with **FOLDING ANTENNAS (15)**. These should be extended fully to obtain maximum range. Optimal antenna position is 45 degrees from the receiver (at 90 degrees from each other). For maximum range, it is always best to maintain a line of sight (no obstructions) between the receiver antennas and the transmitter at all times whenever possible.

4. Mute (Squelch) Adjustment

In normal operation, the **SQUELCH CONTROL (6)** should be set fully clockwise to the factory preset RF level (Max. Sens.). However, in areas of high RF activity, the squelch (or mute, as it is sometimes called) may need to be adjusted to compensate for the adverse conditions in a particular location. If, with the transmitter off, the receiver's A or B **DIVERSITY LED INDICATORS (13)** flicker or stay on, the squelch control should be turned counterclockwise until the A or B LEDs extinguish. When the squelch is properly adjusted, the A or B LEDs will only light when the system transmitter is turned on. Turning the squelch control too far counterclockwise will reduce the range, but yield a quieter squelch (mute) function. During operation, especially at ranges greater than 75 feet, one or the other of the A or B LEDs may extinguish briefly. This is normal—the unit's DigiTRU Diversity™ reception ensures that the received audio will not be interrupted. When both LEDs extinguish, 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. Bass Boost Control

Ordinary wireless systems all sound somewhat thinner (with less bass) than hardwired. This is due to (1) natural side effects of the noise reduction circuitry employed, and (2) lack of the high-frequency roll-off normally caused by longer hardwired cable runs. Adjust the **BASS BOOST (15)** control to add back low frequency content in your signal as desired. This is a low-pass filter, with up to 6 dB of gain, over flat response centered in the 30-300Hz, when turned fully clockwise. The normal wireless sound is with the control left fully counterclockwise.

6. Connecting the Audio Output

The U-33B receiver provides both a fixed mic level **BALANCED AUDIO OUTPUT XLR (7)** and an adjustable line level **UNBALANCED AUDIO OUTPUT 1/4" JACK (10)**. The level from the **UNBALANCED OUTPUT** is controlled by the rear panel **VOLUME CONTROL (8)**.

Insert an audio cord with a 1/4" mono phone plug in the **UNBALANCED OUTPUT JACK (10)** on the rear panel of the receiver. Plug the other end of the cord into an amplifier, effects, or mixing board. Adjust the **VOLUME CONTROL (8)** on the U-33B receiver clockwise to maximum rotation, until the volume level is comfortable for your application. This setting is roughly equivalent to a direct instrument cord connection.

*(Note: You can connect both outputs at the same time for added versatility in use. For example, simultaneously hook up the **UNBALANCED AUDIO OUTPUT (10)** to your bass amplifier and the **BALANCED AUDIO OUTPUT (7)** to the FOH mixer.)*

(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. Also make sure that the phantom power on the input of the mixer is turned OFF before making connection to the receiver.)

