



U-41 QUAD

*Four Discrete Channel UHF
Wireless Microphone System*

SERVICE INFORMATION

(U.S.) If you are experiencing operation problems with your system, check out the support page on the Nady website: www.nady.com for help and for contacting the Nady Service Department. Should your wireless system require service, you must contact the Nady Service Department at (510) 652-2411 for a Return Authorization (R/A) Number and a service quote (if out of warranty) before sending the unit in. Make sure the R/A Number is clearly marked on the outside of the package. Ship the unit prepaid with cashier's check or money order enclosed (if not prepaid with credit card) to: Nady System Inc., 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 follow the instruction of your Warranty Card regarding Warranty Service.

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

DO NOT ATTEMPT TO SERVICE THIS UNIT YOURSELF, AS THAT WILL VOID YOUR WARRANTY.



NADY SYSTEMS, INC.

6701 Shellmound Street • Emeryville, CA 94608
Tel: 510.652.2411 • Fax: 510.652.5075 • www.nady.com

OWNER'S MANUAL

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INTRODUCTION

Thank you for choosing the Nady U-41 QUAD wireless system, and congratulations on your choice. The Nady U-41 QUAD Wireless systems are by far the best performance and price value in professional UHF wireless. It offers clear channel operation on the wide-open, uncluttered UHF band for interference-free performance in any application or locale. The U-41 QUAD delivers 4 discrete channels in frequency from 796.30 MHz to 803.30 MHz. The U-41 QUAD Wireless system feature Nady's proprietary companding and low noise circuit for an industry best 120dB dynamic range, and the clearest, most natural sound available in wireless today.

USING THIS MANUAL

This booklet gives instructions for the operation of the U-41 QUAD Wireless systems: The U-41 QUAD receiver, transmitter models UH-4 Handheld Microphone, UB-4 bodypack Lavalier Microphone, and Link-4 Snap-On microphone transmitters.

This manual will first explain the benefits of the U-41 QUAD Wireless System and then will take you step by step on how to operate your new system. Each section will give you detailed information. Also, included in this manual are the frequency chart, microphone-wiring guide, system specifications and servicing information.

SPECIFICATIONS

OVERALL SYSTEM SPECIFICATIONS

Frequency Response	30Hz-18kHz, -3dB
Dynamic Range.....	120dB
Harmonic Distortion.....	<0.5% THD, normal
RF Carrier Frequencies.....	Factory installed channels between 796.30MHz - 803.30MHz
Frequency stability	+/-0.005% crystal controlled
Modulation.....	FM +/-20kHz normal, +/-50kHz maximum
Tone Squelch™ Frequency	32.768kHz
Operating Range.....	250 feet typical, 500+feet max line of sight

RECEIVER SPECIFICATIONS

Controls.....	Power ON/OFF buttons, Volume/Mute controls
Audio Output Level.....	Unbalanced Sum output: 360mV variable level Balanced output: +/-24mV fixed level
Connectors.....	Balanced: XLR. Unbalanced: 1/4" TS. Antennas: BNC connectors. DC in: 2.1mm barrel type.
Indicators.....	Power On, TX ON LED and AF 5-segment bargraph
Mute Threshold.....	-65dBm to -95dBm (adjustable)
Image Rejection	70dB, minimum
Power Requirement.....	16.5VDC/0.4A
Antennas.....	Dual, 4.25" (10.8 cm) each, adjustable
Dimensions.....	17.0" x 6.25" x 1.75 [W / D / H] (43.18 cm x 15.88 cm x 4.45 cm) [W / D / H]
Weight	4.10 lbs (1.86 Kg)

TRANSMITTER SPECIFICATIONS

Models Available.....	UH-4 handheld, LINK-4 SNAP-ON transmitters, UB-4 bodypack
RF Output Power.....	+14dBm (25mW normal), +17dBm (50mW maximum allowed by FCC)
Harmonic/spurious	-50dBc normal
Antenna Type	UH-4: integral. LINK-4: integral into attached mic UB-4: External permanent attached
Controls.....	Transmitter ON/Mute/OFF switch, Audio Input level control, Phantom Power On/Off (LINK-4)
Audio Input Levels.....	UH-4: 24mV. LINK-4: 24mV. UB-4: 225mV (Instr.), 310mV (HM), 75mV (Lav.)
Impedance.....	UH-4: 3.3k Ohms. LINK-4: 360 Ohms. UB-4: 500k Ohms (Instr.), 2k Ohms (HM/Lav.)
Connector	UB-4: 3.5mm locking jack. LINK-4: XLR with phantom power
Indicator.....	Power and Low Battery LEDs
Battery Type/ Life.....	9V alkaline, 8-10 Hours normal
Dimensions.....	UH-4: 9.5" x 2.0" [L / Dia.] (24.13 cm x 5.08 cm) LINK-4: 1.5" x 4.5" x 1.5" [W / D / H] (3.81 cm x 11.43 cm x 3.81 cm) UB-4: 2.5" x 4.25" x 1.0 [W / D / H] (6.35 cm x 10.80 cm x 2.45 cm)
Weight (w/o batteries).....	UH-4: 6.6 oz (187 g), UB-4: 3.1 oz (88 g), LINK 4: 2.6 oz (80 g)

Specifications and design subject to change for improvement purposes without prior notice.

FREQUENCY PLAN

Four UHF frequencies

Channel 1 U7:	796.30 MHz
Channel 2 U1:	800.20 MHz
Channel 3 U6:	797.50 MHz
Channel 4 U3:	803.30 MHz

TIPS

- The receiver antennas should be kept away from any metal surface.
- For optimum operation with external antennas use only low loss RF shielded cable no longer than 10' (3m) in length.
- If the Volume Control of the receiver is set too high, it may over-drive the input of the mixer or PA, causing distortion. Conversely, if the output is set too low, the overall signal-to-noise ratio of the system may be reduced. Adjust the output level of the receiver such that highest sound pressure level going into the microphone causes no input overload in the mixer or PA, and yet permits the mixer level control to operate in the normal range (not too high and not too low). This provides the optimum signal to noise for the entire system.
- Before inserting the batteries, please make sure that they are inserted according to the correct polarity.
- Use only brand new alkaline batteries. Do not use "general purpose" carbon zinc batteries. When the batteries are weak, replace all the batteries together at the same time.
- Position the receiver such that it has the least possible obstructions between it and the transmitter. Line of sight is best!
- The transmitter and the receiver should be as close as possible for optimum performance, but never less than 3' (1 meter) as that can overload the RF input circuitry of the receiver and cause reception problems for the other channels.
- For the best operation, the receiver should be placed at least 1 meter above the ground and 1 meter away from a wall or metal surfaces. The transmitter should be also at least 1 meter from the receiver. Keep the receiver antennas away from noise source such as motors, automobiles, neon light, signal processor, computer, as well as large metal objects.
- A receiver cannot receive signal from two or more transmitters simultaneously. The U-41 QUAD has 4 receivers so can be operated with 4 transmitters if they're on the same corresponding frequencies.
- Turn the transmitter off when it is not in use. As batteries can leak over time, remove the them if the transmitter is not to be used for a long period.

Note: Scratchy noises can sometime occur when some electric guitars with dirty pots or connections are used with any wireless system. Therefore, the capacitor internal to the 1/4" plug in the supplied GT (instrument) cable 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:

- a. Make sure all guitar volume and tone pots are clean and all contacts are solid--this is very important.*
- b. A 47pF capacitor soldered across the pot to ground terminal of the guitar's volume and tone pots will provide extra filtering as necessary.*

SYSTEM FEATURES

U-41 QUAD Receiver

- Four discrete UHF wireless receivers in a single rugged 19" 1U, all-metal rack mount housing
- Back panel Balanced XLR mic level outputs, Unbalanced 1/4" jack line level sum output with separate volumes, and external adjustable mute control for each channel
- Front panel LED display indicating TX on (single LED) and AF levels (5-segment bar graph) for each channel, and dual removable antennas
- Nady's exclusive patented companding circuitry and highest quality audio for an unsurpassed UHF performance with 120dB dynamic range
- Operates on the UHF frequency band from 796.30 MHz to 803.30 MHz
- Tone Squelch circuitry for protection from RF interference
- Externally powered with DC adapter included (16.5VDC/0.4A)

UH-4 Handheld Microphone Transmitter

- Nady DM-10D neodymium cartridge delivers transparent vocals, maximum feedback rejection and minimal handling noise
- OFF/MUTE/ON switch for ease of use
- Unique screw-on battery compartment for quick pop-in battery replacement — uses standard 9V alkaline battery
- POWER and LOW BAT LED indicators
- Input level control for optimum sound adjustment
- Rugged ABS housing with integral antenna

UB-4 Bodypack Transmitter

- Compact bodypack with locking jack for lavalier microphone
- OFF/MUTE/ON switch for ease of use
- Unique sliding battery compartment for quick pop-in battery replacement — uses standard 9V alkaline battery
- POWER and LOW BAT LED indicators
- Input level control for optimum sound adjustment, LT (lavalier mic) and HM (headmic) modes
- Rugged ABS housing with external antenna

LINK 4™ SNAP-ON Transmitter

- Compact microphone transmitter that converts any dynamic/condenser XLR hardwired microphone (handheld, lavalier or headworn) to wireless operation
- OFF/MUTE/ON switch for ease of use
- Unique sliding battery compartment for quick pop-in battery replacement- uses standard 9V alkaline battery
- Single LED indicator flashes once for unit on; lights steady for low battery alert
- Audio HI/LO gain selection for optimum sound
- 9V DC phantom powering on/off for lavalier or handheld condenser microphone
- Standard locking 3-pin connector with adjustable threaded ring to provide secure connection to any XLR handheld or lavalier microphone connector
- Lightweight ABS housing with integral antenna

Rack-mounting the Receiver

The Nady U-14 QUAD UHF receiver has built-in brackets for rackmounting. Simply attach the unit to the rack with supplied screws.

(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-41 QUAD. Always ensure adequate airflow and heat dissipation in any rack configuration.)

Installing Antennas

Connect the two **ANTENNAS (1)** included with your system to the two **RF BNC (2)** connectors located on the left and right front of the U-41 QUAD receiver.

The optimal positions of the antennas are 90 degrees from the receiver, upright. For maximum range, it is always best to maintain a line of sight (with no obstructions) between the receiver antennas and the transmitter whenever possible.

Powering the Receiver

Power the receiver by plugging the provided **AC ADAPTOR (3)** (16.5VDC/0.4A) plug into the **DC INPUT JACK (4)** on the back of the receiver. Then plug the adapter into an AC outlet. *(Note: Any 16.5VDC source with 400mA capacity can also be used.)* Turn the **VOLUME CONTROLS (5)** of all channels counterclockwise to minimum settings. Once the receiver is connected to a power source, press the **POWER SWITCH (6)** to the ON position. The **TX INDICATOR LEDs (7)** on the front panel of the receivers will not light up at this time, until one or more of the four channels is receiving a signal from your system's transmitters.

To turn OFF, press the **POWER SWITCH (6)** to the OFF position.

Adjusting the Mute Control

In normal operation, each channel's **MUTE CONTROL (8)** should be turned clockwise fully to the factory preset RF level of 1 μ V for maximum sensitivity. Doing so sets each receiver for maximum range. However, in case of high RF activity, the mute should be adjusted. If, with a transmitter turned off, the corresponding LED on the receiver front panel flickers or stays on, the **MUTE CONTROL (8)** should be turned counterclockwise until the LED extinguishes. For each of the four channels, when the mute is properly adjusted, the corresponding LED will light only when the system's transmitter is turned on.

Turning the mute clockwise too far will result in reduced range, but yield a quieter signal during dropouts or at the end of the operating range.

Audio Level and Peak LED indicator

The U-41 QUAD receiver is equipped with a 5-segment **LED AF LEVEL (9)** display for each channel. The red LED on the right of these displays is the audio peak indicator. Note that the red peak LED will light with a strong audio signal from the transmitter. Occasional flickering of the peak LED on loud input signals to the transmitter is normal. However, if the peak LED lights continuously, the volume into the transmitter should be decreased or audio distortion may result.

Connecting the Audio Outputs

The U-41 QUAD audio output stage of each channel is configured for XLR balanced with a fixed mic level and an output impedance of 600 ohms to accommodate both balanced and unbalanced mixer / PA inputs. The XLR outputs are preset at the factory and are not adjustable with the receiver volume controls. For each channel you wish to use, insert an audio cord with a XLR plug into its audio jack on the back of the receiver. Plug the other end of the cord into your mixing board, PA, preamp or effects processor. The volume level of each receiver should be adjusted at the mixing board.

Feedback

Observe care in selecting PA 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. Omni directional mics pick up sound equally from all direction, and are prone to feedback if not used carefully. Unidirectional mics (cardioid, super-cardioid or hyper-cardioid) are more resistant to feedback. However, all mics pick up sound sources best that are directly in front of the mic. Also mics that are farther from the sound source, such as lavaliers, require more acoustic gain through the system to get proper levels and thus are also more prone to feed back than close-source mics such as handheld or headworn models that are used close to the mouth.

Microphone Damage

Headset and lavalier mic users should note that the microphone element can easily be destroyed by the buildup of salts and minerals from perspiration and saliva. It is good practice to put a wind-screen on the mic at all time to protect it.

No Audio

If you are not getting audio through the system, carefully recheck all setup procedures. Start by confirming that the receiver and transmitter are on the same RF channel (frequency).

RF Interference

If you encounter receiving interference (from other than an operating TV station on the same frequency), often it can be overcome by adjusting the receiver's **MUTE (squelch) CONTROL (8)**. Please note that wireless frequencies are shared with other radio services. According to FCC regulations, wireless microphone operations are unprotected from interference from other licensed operations in the band. If any interference is received by any Government or non-government operation, the wireless microphone must cease operation or change frequencies. The above statement is valid only for use in the U.S.A.

LINK-4™ SNAP-ON TRANSMITTER

Receiver Volume Controls Adjust

The volume controls work only for the 1/4" sum (MIX) output. Turn **VOLUME CONTROLS (5)** on the U-41 QUAD receiver clockwise to near full gain. Adjust Volume up or down so that no audio distortion is present when amplifier or mixer is set at their usual levels. At full gain, the system gain is approximately +20 dB higher than a direct line-to-amp connection.

If the fixed level XLR outputs are used, the volume level of each receiver should be adjusted by the mixer to which the U-41 QUAD receiver is connected.

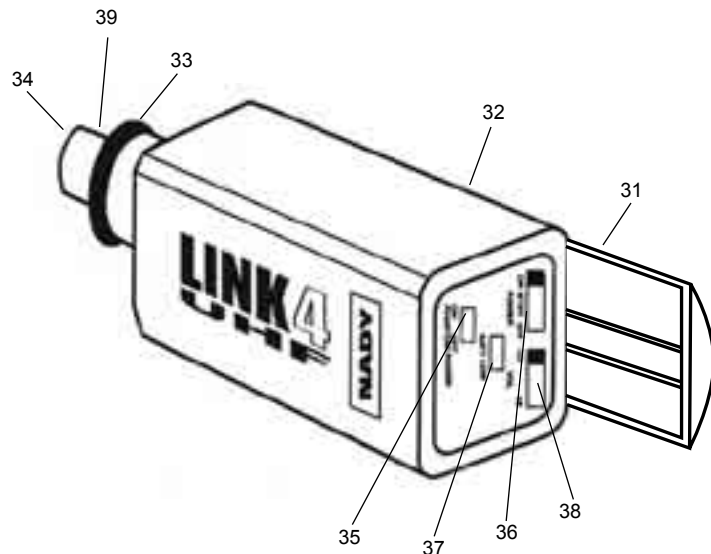
Level Trim Adjust

For optimum performance, an **INPUT SELECT SWITCH (38)** is provided. Select the switch for either LO or HI gain setting according to your microphone use. Depending on the average distance between vocalist's mouth and microphone, you can adjust the level for your application. The factory setting is LO for hardwire dynamic microphone. This is a setting to be used in most typical close microphone applications. Set for maximum possible gain and headroom without noticeable distortion of the high level peaks. Experiment and set for maximum possible gain without audible distortion on the high level peaks. (Note: *Selecting LO gain setting if the input signal is already low can compromise the signal-to-noise ratio and it is not recommended if the vocalist's mouth is far from the microphone.*)

The microphone is now ready to use. The **TX ON LED (7)** on the corresponding receiver should now be on, indicating a received signal from the transmitter. When ready to speak, slide the **OFF/STANDBY/ON SWITCH (36)** to the ON position and turn on the attached microphone's mute switch if it was off. Adjust the volume of the receiver as outlined in the Receiver Operating Instructions: Connecting Audio Outputs.

Notes:

- *Observe care in selecting PA volume, transmitter location and speaker placement so that acoustic feedback (howling or screeching) will be avoided.*



U-41 QUAD RECEIVER

The U-41 QUAD also has a summed adjustable line level unbalanced output for all channels (MIX). To use, just plug an audio cable with a 1/4" mono plug into the MIX out and plug the other end into your mixing board or PA. Adjust each channel's **VOLUME CONTROL (5)** up or down so that no audio distortion is present when the mixer or PA is set to usual levels.

Your U-41QUAD is now operational and ready to use. Now that you have completed the above step, proceed to instructions for the UH-4 or UB-4 transmitter included with your system.

Additional Features — Tone Squelch™

The U-41 QUAD receiver and transmitters feature Nady's Tone Squelch™ circuit. Nady now offers Tone Squelch™ for professional uses to protect against RF interference during recording, performance, or presentation.

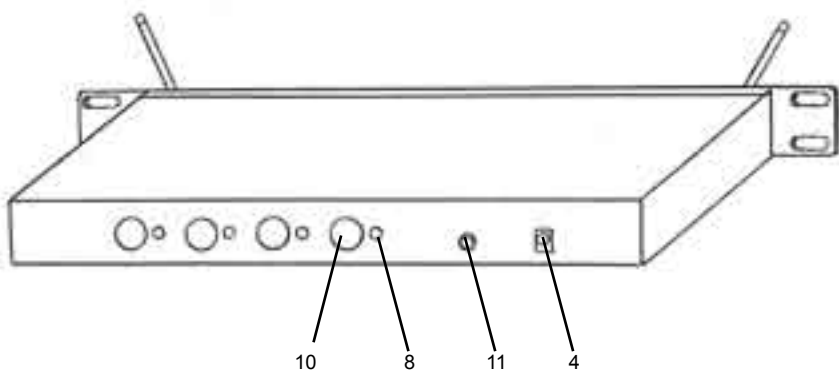
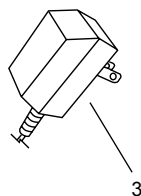
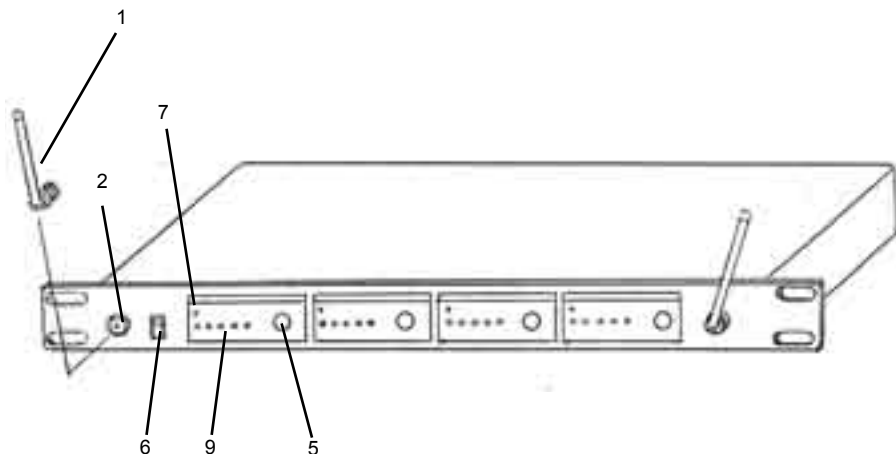
The receiver detects a specific tone code signal from your transmitter, which unlocks your receiver's audio. In this manner only your own transmitter's signal can be heard. (The receiver has an internal Tone Squelch defeat feature. Contact your Nady dealer or Nady Systems Customer Service for details.)

This feature is ideal for situations when the transmitter is turned on or off during use. With Tone Squelch™, an unwanted signal on the same operating frequency will be muted out even if the receiver is left on with the transmitter(s) off. Thus Tone Squelch™ prevents pops or disruptive noises from entering your sound system.

Note:

- *Noise from unused channels is normal and does not indicate a defective channel. This noise is caused by the mixing of RF waves.*
- *To prevent possible undesired noise from unused channels during use, keep the volume controls of unused channels turned off in the mixer or PA.. The audio should only be "live" if the transmitter is on.*
- *When making any connection, make sure the mixing board or PA volume is minimum before plugging in the receiver to avoid possible sound system damage.*
- *Only one transmitter can be used with one receiver. It is not possible to use two transmitters on the same frequency. The U-41 QUAD receiver has 4 discrete receivers built in so it can be used with 4 transmitters.*

U-41 QUAD RECEIVER



LINK-4™ SNAP-ON TRANSMITTER

Transmitters Set Up

The LINK-4 transmitter requires a single 9V battery to operate. To open the battery compartment, slide the **BATTERY DOOR (31)** downward to open the cover, exposing the **BATTERY HOLDER (32)**. Insert a fresh 9V battery according to the correct polarity as indicated on the transmitter body. Slide back the door onto the original position. Make sure the cover is secured completely. Fresh Alkaline batteries can last up to 10 hour of operation, but in order to ensure optimum performance, it is recommended that the batteries should be replaced after 6-8 hours of use.

Handheld Microphone Installation

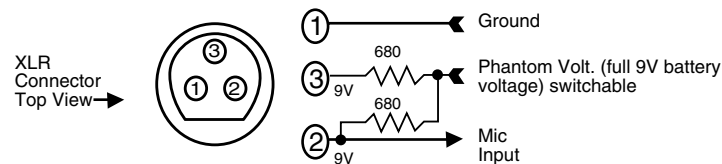
- Step 1 Rotate the transmitter's threaded **LOCKING RING (33)** counter-clockwise in towards the transmitter body until it stops.
- Step 2 Hold your mic in one hand and the LINK-4 in the other.
- Step 3 Place your mic into the **XLR CONNECTOR (34)** and push your mic all the way down until it clicks into place..
- Step 4 Lock the mic into place with the adjustable threaded **LOCKING RING (33)** by rotating the ring clockwise, to the top of the transmitter.
- Step 5 To release the **XLR CONNECTOR (34)**, turn the threaded **LOCKING RING (33)**

Lavalier Microphone Installation

You will need a male XLR-to-mini-male XLR adaptor (Switch-Craft TA-4 or equivalent) to use a lavalier microphone per the installation instructions. Plug the lavalier microphone's mini male XLR into the adaptor.

Note: The lavalier microphone you are using must terminate with a mini XLR or full XLR connector and confirm to the pin assignments shown below. If they do not, the lavalier mic may not work with the LINK-4. If you have any questions, please contact your Nady dealer or Nady Systems Service Department.

The pin assignments on the LINK 4 XLR connector are as shown:



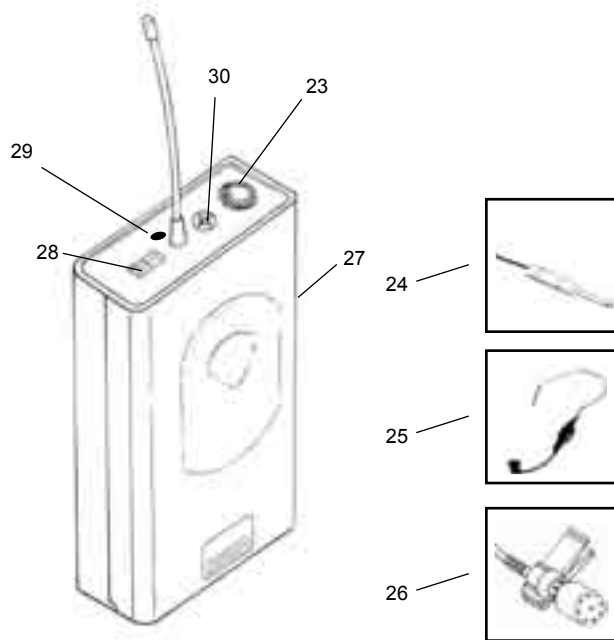
Microphone Operation

To turn it on, slide the **OFF/STANDBY/ON SWITCH (36)** to the STANDBY position first (transmitter on, audio muted) or the ON position (transmitter and audio both on). You could also use your attached microphone's audio mute switch afterward. The **BATT LOW LED (37)** will give a single flash, indicating usable battery strength. In case of a dead or low battery, the LED will either not go on at all or will stay on continuously, indicating that the battery should be replaced with a fresh one. To preserve battery life, turn the transmitter off when not in use.

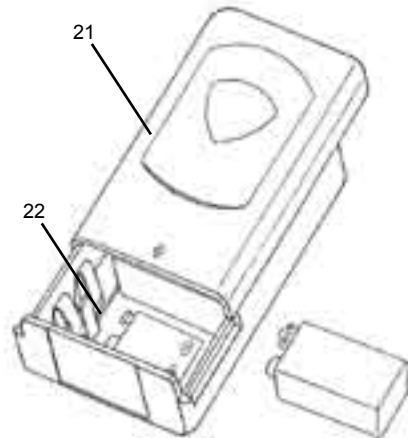
To turn off, slide the **OFF/STANDBY/ON SWITCH (36)** to the OFF position. No LEDs will light up. The unit is now off.

UB-4 BODYPACK TRANSMITTER

INPUT SELECTOR SWITCHES	
Instrument	HL G G H L
Headworn	HL G G H L
Lavalier	HL G G H L



Opening Battery Compartment



UH-4 HANDHELD TRANSMITTER

Transmitters set up

The UH-4 transmitter requires a single 9V battery to operate. To open the battery compartment, unscrew and remove the **BATTERY COVER (16)**, exposing the **BATTERY HOLDER (17)**. Insert a fresh 9V battery according to the correct polarity as indicated on the transmitter body. Screw cover back onto the microphone. Make sure the cover is screwed on completely. Fresh alkaline batteries can last for up to 10 hours of operation, but in order to ensure optimum performance, it is recommended that the batteries should be replaced after 6-8 hours of use.

Microphone Operation

To turn transmitter on, slide the **OFF/STANDBY/ON SWITCH (18)** to the STANDBY position first (transmitter on, audio muted) or the ON position (transmitter and audio both on). The **LOW BAT LED (19)** will give a single flash, indicating usable battery strength. In case of dead or low battery, the LED will either not go on at all or will stay on continuously. If the **LOW BAT LED (19)** stays on continuously during use, it is indicating that the battery should be replaced with a fresh one as soon as possible. To preserve battery life, turn the transmitter off when not in use.

Receiver Volume Controls Adjust

The volume controls work only for the 1/4" sum output (MIX). Turn the corresponding **VOLUME CONTROLS (5)** on the U-41 QUAD UHF receiver being used clockwise to near full gain. Adjust Volume up or down so that no audio distortion is present when amplifier or mixer is set at their usual levels. At full gain, the system gain is approximately 4dB higher than a direct line to amp connection.

If the fixed level XLR outputs are used, the volume level of each receiver should be adjusted by the mixer to which the U-41 QUAD UHF receiver is connected.

Level Trim Adjust

For optimum performance, an **INPUT LEVEL CONTROL (20)** is provided for the transmitter. Adjust the microphone gain by inserting a small slot-headed screwdriver through the adjustment hole, located on the topside of the battery compartment, under the compartment cover. Factory setting is 1/2 full. This is a setting to be used in most typical close microphone applications. Depending on the average distance between vocalist's mouth and microphone, you can adjust the level for your application. Set for maximum possible gain and headroom without noticeable distortion of the high level peaks. It is recommended that the level be set at about 1/2 maximum. Experiment and set for maximum possible gain without audible distortion on the high level peaks.

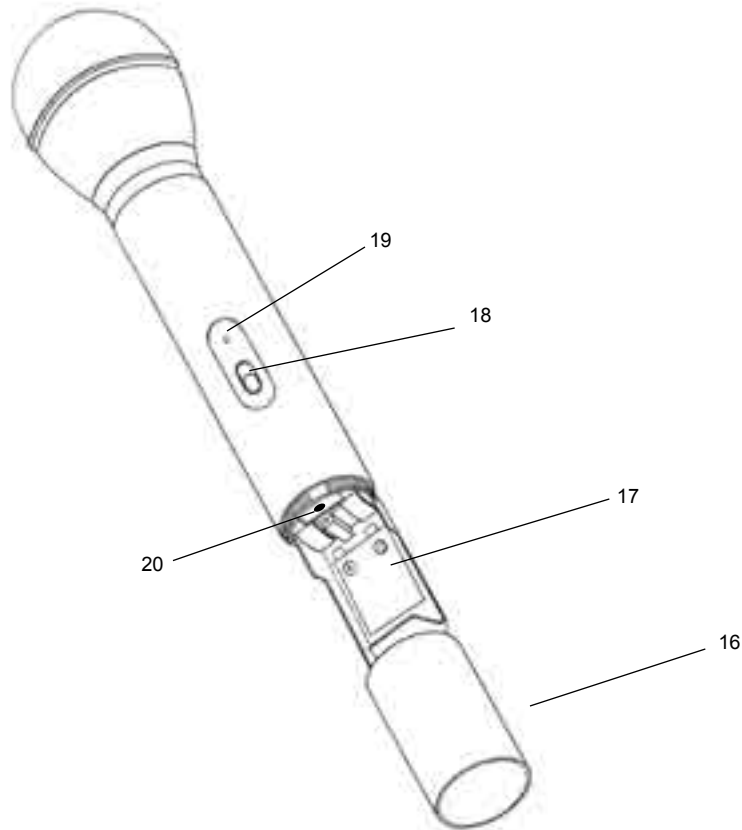
(Note: Turning down the gain too much can compromise the signal-to-noise and it is not recommended.)

The microphone is now ready to use. The **TX ON LED (7)** on the corresponding receiver should now be on, indicating a received signal from the transmitter. When ready to speak, slide the switch to the ON position. Adjust the volume of the receiver as outlined in the Receiver Operating Instructions: Connecting Audio Outputs.

Note:

- The battery compartment on the UH-4 functions as a built-in antenna. For proper operation, it should not be covered by the hand or touched during operation.
- Observe care in selecting PA volume, transmitter location and speaker placement so that acoustic feedback (howling or screeching) will be avoided.

UH-4 HANDHELD TRANSMITTER



UB-4 BODYPACK TRANSMITTER

Transmitters set up

The UB-4 transmitter requires a single 9V battery to operate. To open the battery compartment, snap open the **BATTERY DOOR COVER (21)**, exposing the **BATTERY HOLDER (22)**. Insert a fresh 9V battery according to the correct polarity as indicated on the transmitter body. Snap the cover back onto the bodypack. Make sure the cover is secured completely. Fresh alkaline batteries can last up to 10 hours of operation, but in order to ensure optimum performance, it is recommended that the batteries should be replaced after 6-8 hours of use.

Input Connection and Input Selector Switches

The UB-4 is provided with a **3.5MM LOCKING JACK (23)** for connecting the audio input selected. Connect either the **INSTRUMENT CORD (24)**, or the **HEADWORN MIC (25)**, or **LAVALIER MIC (26)** as desired, according to the input selected. (Note: Use only the input audio source as per the input selected with the internal Input Selector Switch or the audio will not be optimal- a muddy or distorted sound may result.) 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 it onto your cloth or instrument strap (if using the UB-4 as an instrument transmitter.)

UB-4 BODYPACK TRANSMITTER

The UB-4 is equipped with two **INPUT SELECTOR SWITCHES (27)** 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/ LAVALIER MIC. (G/H/L)**.

There are two switches, one with selectable position G, H, L and the other with G, HL.

To select inputs: (see chart on page 10)

- A. Instrument — both switches to "G"
- B. Headworn Mic — set one switch to "H" and the other to "H"
- C. Lavalier Mic — set one switch to "L" and the other to "L"

Microphone Operation

To turn it on, slide the **OFF/STANDBY/ON SWITCH (28)** to the **STANDBY** position first (transmitter on, audio muted) or the **ON** position (transmitter and audio both on). The **LOW BAT LED (29)** will give a single flash, indicating usable battery strength. In case of a dead or low battery, both LEDs will either not go on at all or will stay on continuously. During use, if the **LOW BAT LED (29)** stays on continuously, the battery should be replaced with a fresh one. To preserve battery life, turn the transmitter off when not in use.

To turn off, slide the **OFF/STANDBY/ON SWITCH (28)** to **OFF** position. No LEDs will light up. The unit is now off.

Receiver Volume Controls Adjust

The volume controls adjust only the $\frac{1}{4}$ " sum (MIX) outputs. Turn the **VOLUME CONTROLS (5)** on the U-41 QUAD receiver clockwise to near full gain. Adjust Volume up or down so that no audio distortion is present when the amplifier or mixer is set at their usual levels. At full gain, the system gain is approximately +20dB higher than a direct line to amp connection.

If the fixed level XLR outputs are used, the volume level of each receiver should be adjusted by the mixer to which the UHF-24 receiver is connected.

Level Trim Adjust

For optimum performance, an input level control for LT/HM is provided. Adjust the microphone gain by inserting a small slot-headed screwdriver to the adjustment knob, located on the topside of the transmitter unit, next to the mic input jack. Factory setting is $\frac{1}{2}$ full. This is a setting to be used in most typical close microphone applications. Depending on the average distance between vocalist's mouth and microphone, you can adjust the level for your application. Set for maximum possible gain and headroom without noticeable distortion of the high level peaks. It is recommended that the level be set at about $\frac{1}{2}$ maximum. 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.)

The microphone is now ready to use. The **TX ON LED (7)** on the corresponding receiver should now be on, indicating a received signal from the transmitter. When ready to speak, slide the **OFF/STANDBY/ON SWITCH (28)** to the **ON** position. Adjust the volume of the receiver as outlined in the Receiver Operating Instructions: Connecting Audio Outputs.

Note:

- The microphone has an external flexible wire antenna. For proper operation, it should not be covered or touched during operation.
- Observe care in selecting PA volume, transmitter location and speaker placement so that acoustic feedback (howling or screeching) will be avoided.