

Lanen True Diversity UHF Systems

For electric and bass guitars: **GB21**
For Series 21 mics: **UHF21**

User Manual

GB21 receiver/UHF21 transmitter



Safety Information

Thank you for purchasing this digital appliance. To ensure perfect operation and security, please read the manual carefully and retain it for future reference.

Precautions



The lightning flash with the arrowhead symbol in an equilateral triangle is intended to alert the user to the presence of non-insulated “dangerous voltage” inside the appliance that may be of sufficient magnitude to constitute a risk of electric shock.



The exclamation mark within an equilateral triangle is intended to alert the user to the presence of important operating and maintenance (servicing) instructions in the literature accompanying the product.

Important Instructions

- 1) Read these instructions.
- 2) Retain these instructions.
- 3) Heed all warnings.
- 4) Follow all instructions.
- 5) Do not use this appliance near water.
- 6) Clean only with a dry cloth.
- 7) Do not block any of the ventilation openings that were installed in accordance with the manufacturer’s instructions.
- 8) Do not install near any heat sources such as radiators, heat registers, stoves, or other appliances (including amplifiers) that produce heat.
- 9) Do not defeat the safety purpose of the polarized or grounding-type plug. A polarized plug has two blades with one wider than the other. A grounding type plug has two blades and a third grounding prong. The wide blade or the third prong is provided for your safety. If the plug provided does not fit into your outlet, consult an electrician to ensure replacement of the obsolete outlet.
- 10) Protect the power cord from being walked on or pinched, particularly at plugs, convenience receptacles, and the point where it exits from the appliance.
- 11) Only use attachments/accessories specified by the manufacturer.
- 12) Use only with the cart, stand, tripod, bracket, or table specified by the manufacturer, or sold with the appliance. If using a cart, be careful when moving the cart/appliance combination to avoid injury from tip-over (Figure 1).
- 13) Unplug this appliance during lightning storms or when unused for long periods of time.
- 14) Refer all servicing to qualified service personnel. Servicing is required when the appliance has been damaged in any way, for example, the power-supply cord or plug is damaged, liquid has been spilled or objects have fallen inside the appliance, the appliance has been exposed to rain or moisture, does not operate normally, or has been dropped.



(Figure 1)

WARNING: To reduce the risk of fire or electric shock, do not expose this appliance to rain or moisture.

CAUTION: The appliance should not be exposed to drips or splashes of water. Objects filled with liquids, such as vases, should not be placed on the appliance.



This logo indicates that the product can be recycled after it has been used. Please do not dispose of the product with your normal household waste. Return the product to the shop where you purchased it or place it in the designated recycling container.

Actual product(s) may differ from illustrations/photographs used

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Introduction

We have designed the Lanen GB21 and UHF21 systems as wireless accessories for your electric and/or bass guitar (GB21 receiver) and your Prodipe Series 21 mic (UHF21 transmitter). Both UHF wireless systems use an extremely stable phase-locked loop (PLL) circuit to remove unwanted jitter. They also offer dual antenna/dual receiver circuit analogue wireless transmission (True Diversity). The power consumption for the transmitter and the receiver has been calibrated as accurately as possible to give you a generous battery life. Before leaving the factory, each of our products is meticulously tested by our quality control department.

Statement of Compliance

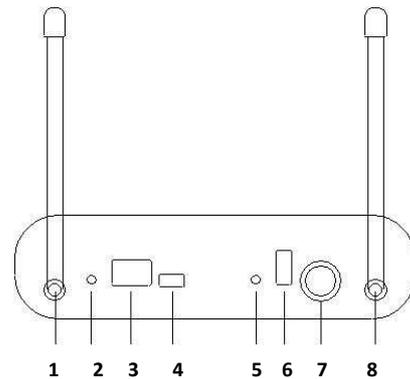
The equipment complies with the essential requirements of the European Directive R&TTE 99/5/EC*. Before using any of the devices, please observe all applicable country-specific regulations. This radio equipment is intended for use in musical professional entertainment and similar activities.

*See statement of compliance at www.prodipe.com

Receiver description

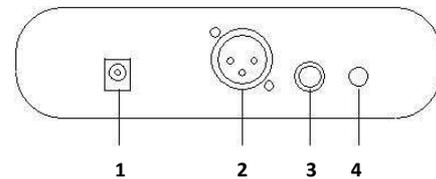
A. Front panel:

1. Antenna socket 1
2. LED SIGNAL: audio signal present
3. Channel display
4. CHANNEL button
5. LED RF: reception indicator
6. Sensor [IR]
7. POWER button/confirm channel selection/SCAN IR
8. Antenna socket 2



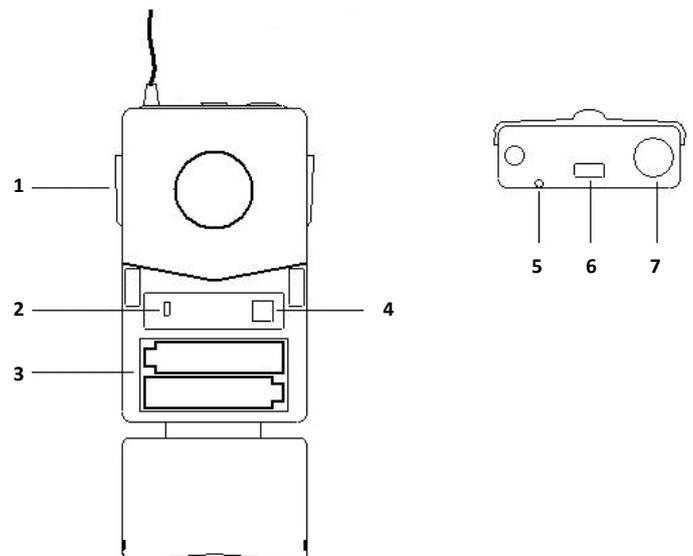
B. Rear panel:

1. Mains connection (DC: 12V)
2. Balanced mono audio output (XLR)
3. Unbalanced mono audio output jack (6.35mm)
4. Volume potentiometer



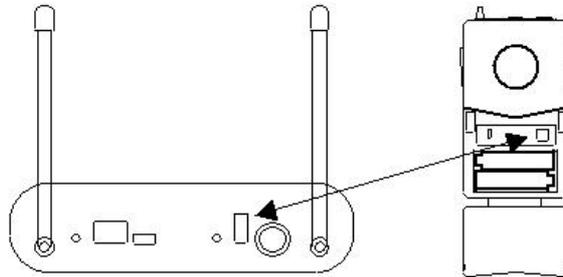
Transmitter description

1. Belt clip
2. Attenuation control:
 - -0dB
 - -10dB
 - -20dB
3. Battery compartment LR6/AA (x2)
4. Receiver [IR]
5. LED: POWER/MUTE
 - POWER (green)
 - MUTE (yellow)
 - Low battery (flashing green)
6. Button: POWER/MUTE
7. Audio input:
 - Mini XLR input socket for active extension cable with jack
 - Mini XLR input socket for Series 21 Prodipe mic



Configuring the transmission channels

Switch on the receiver and the bodypack transmitter by pressing and holding the receiver POWER button (7) and the bodypack POWER button (6). Open the bodypack battery compartment and locate the infrared sensor:



Channel selection is automatic. Ensure that the bodypack infrared sensor is in line with the receiver (about 10cm distance). Press quickly on the receiver SCAN IR button and the synchronisation will start automatically. Once the automatic scan has finished, the channel will be displayed on the channel display screen and the RF reception indicator light will come on.



You can also manually select a channel by pressing and holding the CHANNEL button (4) until one of either number on the channel display flashes. Select the desired number with the CHANNEL button. Then confirm your selection by pressing the POWER button (7) and repeat the process for the second number.



If no selection is made after 10 flashes, the receiver will automatically stop the channel selection process.

Using the equipment

Position the receiver at least one metre above floor level and one metre from walls. In addition, ensure that the receiver is as far as possible from any other source of electromagnetic radiation. Connect the Series 21 mic mini XLR or the active extension cable with jack to the bodypack input connector (7).

Adjusting the bodypack attenuation control for UHF21:

- *Normal volume instrument e.g. violin:* - 0dB
- *High volume instrument e.g. double bass:* - 10dB
- *Very high volume instrument e.g. trumpet:* - 20dB

Adjusting the bodypack attenuation control for UHF21:

- *Bass guitar:* - 0dB
- *Active bass guitar:* - 10dB
- *Electric guitar:* - 10dB or -20dB

Adjust the volume control at the rear of the receiver to your preferred level.



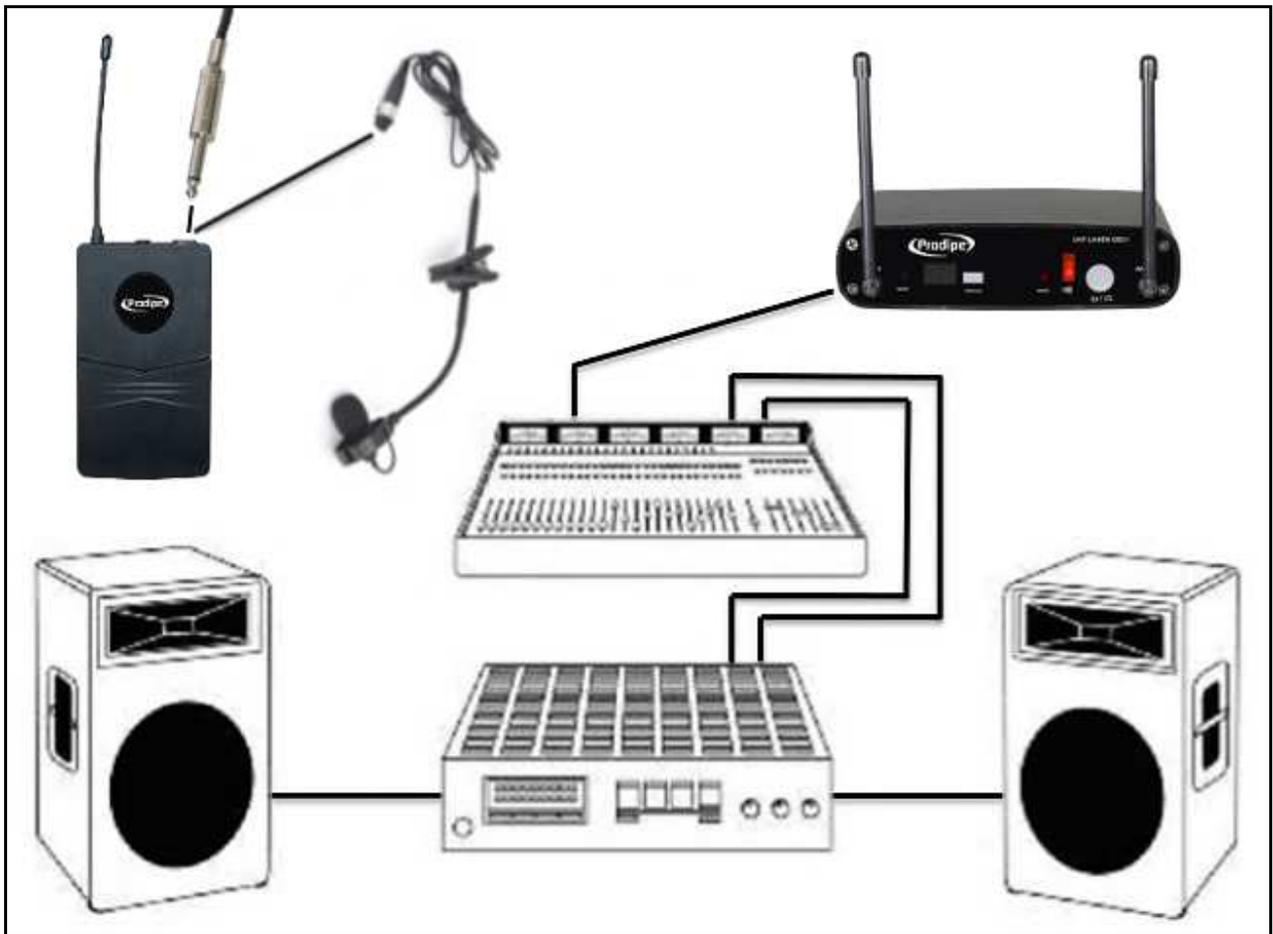
Connections

Receiver mains connection:



Plug the mains cable connector into the rear of the receiver (in the socket provided) and the mains cable into a standard power outlet: 230V/50Hz.

Audio connections:



Connect the guitar/bass guitar active extension cable with jack or the Prodipe Series 21 mic mini XLR to the bodypack transmitter (UHF21).

Connect a cable between the receiver audio output socket (jack or XLR) and your amp/mixing console.

Safety and guarantee

- You should switch the transmitter off before changing the batteries.
- Loss of signal or extraneous noise ('wind') could be caused by a low battery or too large a gap between the transmitter and receiver. First check and test the batteries. If the batteries are fine, readjust the receiver antennae or change the channel.
- To avoid any deterioration in the RF signal, the receiver should not be placed in a corner.
- The receiver antennae should not be near a metallic surface.
- The receiver should be placed as far away as possible from any digital devices (computer, phone, etc.).
- If you have several GB21s/UHF21s, you should ensure that the antennae do not touch or pass in front of each other.
- The transmitter should always be switched off after use and the batteries removed.
- The transmitter and receiver should be kept in a dry, light-free location if not being used for long periods.

Prodipe and its distributors decline all responsibility for any damage caused to the unit in the event that the above safety precautions are not followed.

General overview

- 100 channel PLL True Diversity UHF receiver.
- Infrared carrier frequency synchronisation.
- Built-in dual antennae with high quality transmission.
- Battery life indicator on the bodypack.
- Digital display on 7 segment dual display.
- High fidelity audio module.
- 230V ac/12V dc mains cable provided.
- Operating range (up to 100 metres).

Technical specifications

Receiver:

Receiver type	Double-conversion superheterodyne
Intermediate frequencies	110MHz and 10.7MHz
Antenna impedance (TNC)	50Ω
Sensitivity	15dBuV
Field strength range	15 to 30dBuV
Modulation noise level	>80dB
Weight	800g
Dimensions (WxHxD)	210mm x 160mm x 53 mm

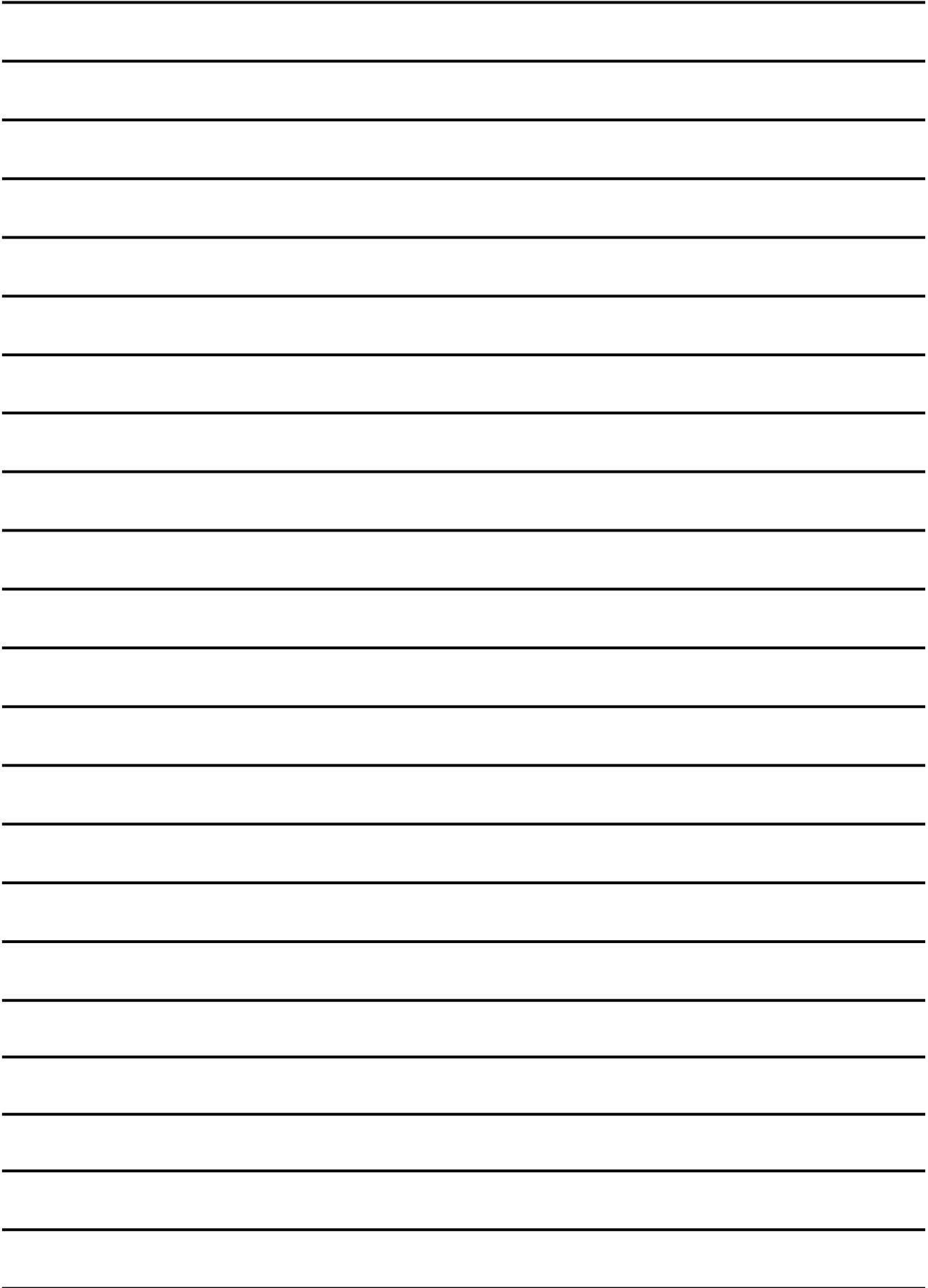
Bodypack transmitter:

Antenna	Built-in antenna (1/4 wave)
Output power	8mW
Max SPL	130dB
Image rejection	>70dB
Mini XLR input (UHF21)	For all Prodipe Series 21 mics
Mini XLR input (GB21)	For active extension cable with 6.35mm jack
Battery type	Type AA alkaline or type NiMH rechargeable batteries

System:

Radio frequency	UHF
Frequency range (GB21)	600MHz to 635MHz
Frequency range (UHF21)	640MHz to 675MHz
Modulation mode	FM
Oscillator mode	VCO + PLL
Maximum deviation	±45KHz (with limiting compressor and AGC)
Channel width	30MHz
S/N ratio	>85dB
Total harmonic distortion	<0.3% to 1KHz (weighted)
Bandwidth	30 to 18000Hz (±3dB)





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