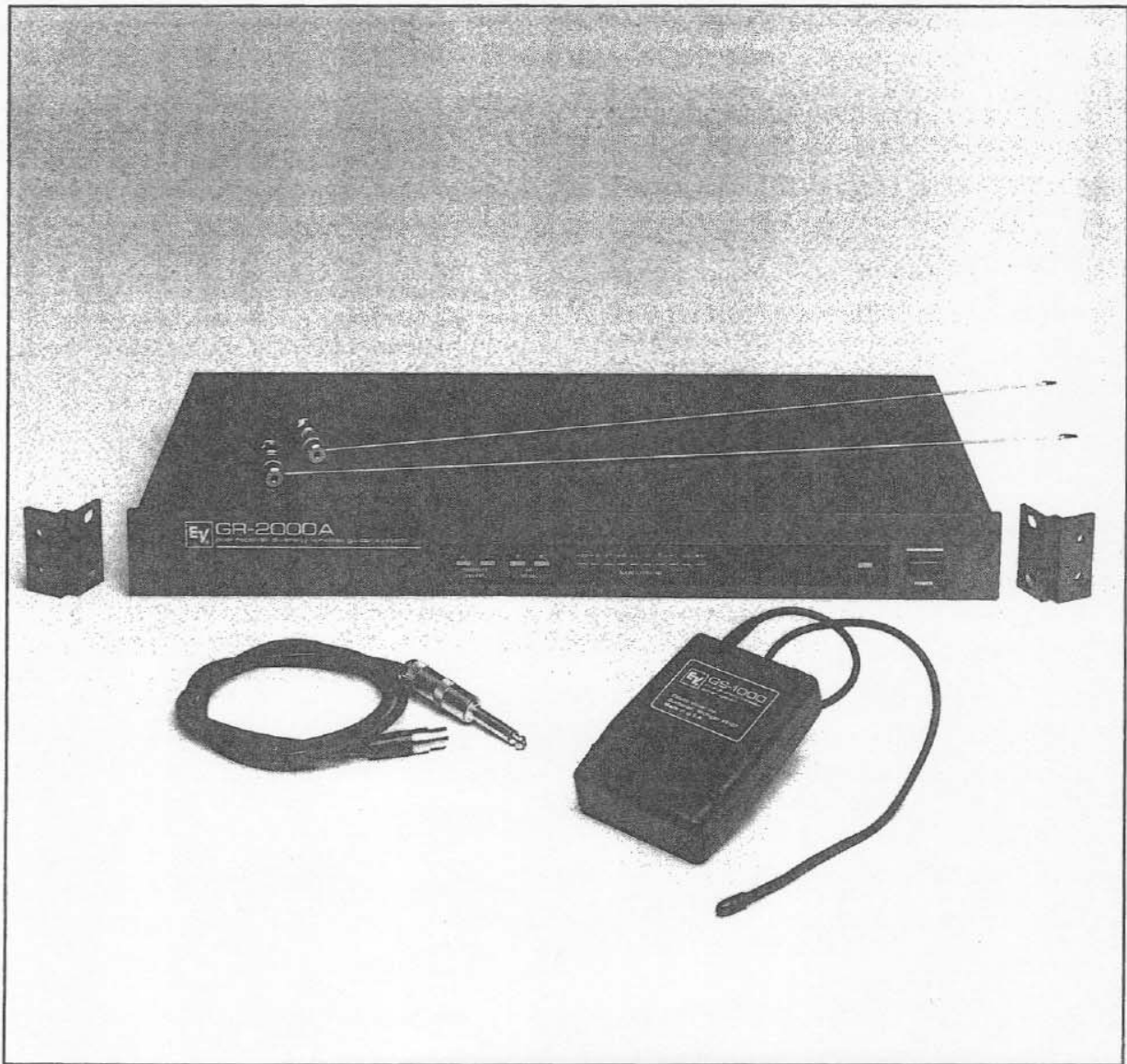




Electro-Voice[®]
WIRELESS SYSTEMS

OWNER'S MANUAL



GS-2000A WIRELESS GUITAR SYSTEM

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NOTE: Any change or modification or combination of changes or modifications made to this product without the express written authorization and approval from Electro-Voice, Inc., could void the user's authority to operate this equipment.

**WARNING: TO REDUCE THE RISK OF FIRE OR ELECTRIC SHOCK,
DO NOT EXPOSE THIS EQUIPMENT TO RAIN OR MOISTURE.**

INTRODUCTION

You have purchased a wireless guitar system of superior quality, designed by the world's premier wireless company. Their many years of designing and building wireless systems for professionals and touring artists have resulted in the very best audio and rf circuits, and a tradition of careful attention to detail.

You will receive many years of superior service from your wireless system, and a new-found freedom now that your movements are no longer limited by a cable. Enjoy the experience. Thank you for your purchase.

WHAT IS A WIRELESS SYSTEM?

In a wireless system, a radio-frequency (rf) signal substitutes for the cable, forming a circuit between the guitar and the amplification system. A wireless system consists of two parts, the transmitter and the receiver. The transmitter sends the audio signal from the microphone to the receiver. An audio cable connects the output of the receiver to amplification system.

At any given rf frequency, only one transmitter at a time can be used to send a signal to a receiver of the same frequency. If multiple wireless systems are needed, a separate receiver is required for each individual transmitter. Each wireless system must operate on a different radio-frequency band in order to avoid interference.

GS-2000A wireless systems operate in the radio-frequency band between 169 and 186 MHz.

FEATURES

GS-1000 Bodypack Transmitter

- Detachable guitar cable with Tini QG (mini 3-pin XLR) connector and 1/4" connector.
- 12-dB level control to match pickup outputs.
- Separate "power on" and "audio mute" transmitter switches.
- 50 milliwatts transmitter output power—the maximum legal limit for the greatest coverage area—and up to 10 hours of operation on a 9-volt alkaline battery.

GR-2000A True-Diversity Receiver

- True dual-receiver space diversity system for maximum range and reliability.
- 105 dB signal-to-noise ratio for noiseless operation.
- Clean, precise, and natural sound reproduction using proprietary DNX™ compander circuitry for audio processing.
- Ten-segment LED audio VU bargraph display, plus squelch and diversity status indicators on the receiver front panel, for fast and easy setup.
- Switchable low and high output level on professional XLR connector, and line output level on standard quarter-inch phone jack.
- Solidly built, rack-mountable receiver with heavy-duty internal ac power supply, switchable for 115-V or 235-V operation, and detachable three-prong (grounded) power cable.

QUICK STARTUP PROCEDURE

To put your GS-2000A wireless system into operation immediately, use the following instructions. Review the detailed information in the remainder of the manual for additional ways to reach optimum performance and sound quality.

GR-2000A Receiver Setup

- 1) **Attach the whip antennas to the rear-panel antenna connectors, twisting clockwise one-quarter turn to lock (disconnect by lightly pushing in and twisting counter-clockwise one-quarter turn) (see Figure 1).** Position the antennas in an upright "V" configuration (like TV rabbit ears). Note: dipole antennas provide better range and reliability in difficult installations. See section on antennas later in this manual.
- 2) **Keep the level low or off on the mixer/preamp/amplifier channel you will be using for the wireless.**
- 3) **Plug the receiver power cable into a standard 120-V ac outlet.** If used with other than a 120-V ac outlet, please see section on "Conversion from 115 to 235 Volt Operation."
- 4) **Plug one end of your audio cable (not supplied) into the appropriate output connector (XLR or quarter-inch) on the rear panel of the receiver (see Figure 2).** Plug the other end of the audio cable into the mixer/preamp/amplifier input. The receiver XLR output is balanced; for single-ended (unbalanced) applications, use only pins 1 (common) and 2 (signal high). The output level in this mode will be 6 dB less than for the balanced mode. The unbalanced quarter-inch output is line level only, and the XLR output is switchable low or high level. Do not connect either pin 2 or pin 3 to ground (common) at any time.
- 5) **Depress the POWER switch to turn the receiver on; the green power LED will light.**
- 6) **Turn the "AUDIO ADJ" control on the receiver rear panel to the "2:00" position (see Figure 3).** Begin with the control in this position; after you have adjusted the transmitter level, you may need to readjust the "AUDIO ADJ" control.

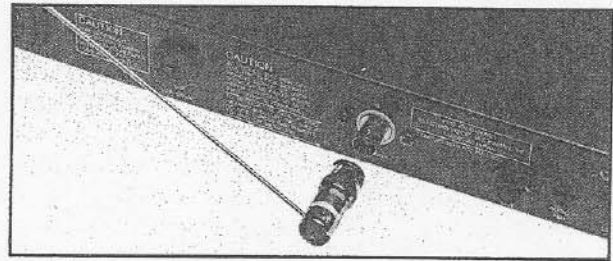


Figure 1 - Connect Antennas on Rear Panel

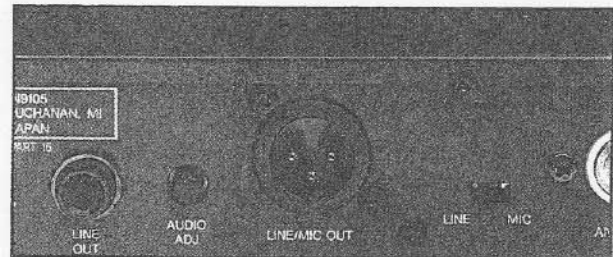


Figure 2 - Connect Audio Cable on Rear Panel

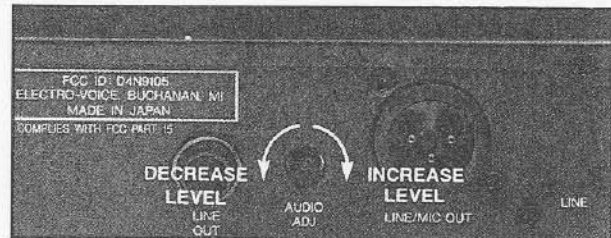


Figure 3 - Adjust Audio Output Level, Rear Panel

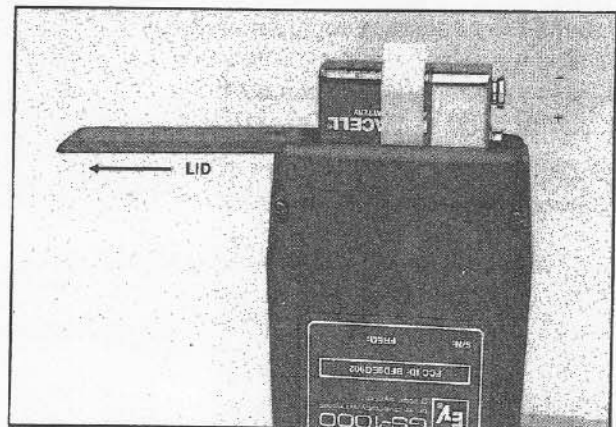


Figure 4 - Install 9-Volt Alkaline Battery into Transmitter, Positive (Smaller) Terminal in First

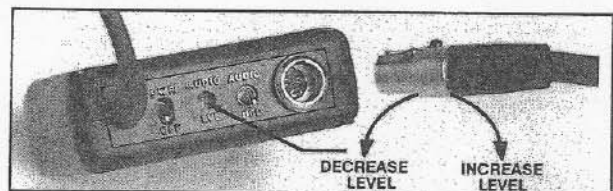


Figure 5 - Adjust Transmitter Audio Level Control

GS-1000 Transmitter Setup

- 1) **Slide the cover of the transmitter battery compartment in either direction, until it is completely off.** Pull the clear-plastic battery-removal tab away from the opening and **slide a fresh 9-volt alkaline battery into the battery compartment, with the positive (smaller) terminal in first.** Push the battery all the way in gently, hold the battery-removal tab against the battery, and slide the cover back into place (Figure 4).
- 2) **Connect the mini-XLR connector of the provided guitar cable to the connector on the transmitter.** Plug the quarter-inch plug on the other end of the cable into the guitar jack.
- 3) **Turn the transmitter "ON" with the recessed "POWER" switch, and position the transmitter in the approximate center of the area to be covered by the wireless system.** Observe that both of the receiver SIGNAL LEDs are lit, and that one of the DIVERSITY CHANNEL LEDs is lit.
- 4) **Turn the guitar volume pot to maximum output, and the guitar tone pot to its normal setting.**
- 5) **Begin with the transmitter "AUDIO LVL" adjustment in the minimum position (fully counter-clockwise).**
- 6) **Turn the audio transmission "ON" with the "AUDIO" (nonrecessed) switch on the transmitter.** As you play (in your normal style, with your normal pick attack), the "AUDIO LEVEL" display on the receiver should show activity.
- 7) **Adjust the transmitter "AUDIO LVL" control with the provided screwdriver (see Figure 5) until the strongest pick attacks bring the receiver "AUDIO LEVEL" display into the red section of the LEDs.** Because different guitar pickups and electronics put out varying levels of voltage, the transmitter level adjustment setting for one guitar may well not be the same for another guitar. For very "hot" pickups, you may need to set the transmitter level adjustment to the minimum setting, fully counter-clockwise.

Final System Adjustments

- 1) **Turn up the level on your mixer/preamp/instrument amp to your normal setting.**
- 2) **Play your instrument and, if necessary,**

adjust the "AUDIO ADJ" control on the back of the receiver with the provided screwdriver until the volume level from the wireless system matches the level of your wired systems.

- 3) **"Walk" the coverage area to check for problems.** If dropouts (little or no signal in small areas) occur, a problem is indicated. Check the battery to make sure it is fresh and new. Also check the antennas to make sure they are not touching each other or metal objects. There must be a clear path from the transmitter to the receiver for proper operation.

Note: The transmitter may also be at its distance limit from the receiver. Maximum distance can vary quite widely depending on the environment where the system is used: number of reflective metal objects; rf interference sources such as DSP devices, computerized lighting controllers, and arcing or malfunctioning electrical devices (such as fluorescent lighting ballasts); and rf sources such as other wireless transmitters, TV broadcast antennas, etc.

- 4) **In normal operation, the "DIVERSITY" LED's on the front panel of the receiver should switch back and forth from "A" to "B,"** indicating proper operation of the internal diversity circuitry. At very close ranges (15 feet, or 5 meters), the signal level may be too high for diversity switching. At longer ranges, failure of the LED's to switch indicates some type of problem (bad antenna, poor antenna location, transmitter too close to one antenna, etc.) which should be investigated and corrected.

COMPATIBILITY

The receiver's VHF high-band frequency must be the same as the transmitter's frequency. When a frequency change is needed, both the transmitter and the receiver should be returned to the factory or authorized service location. Because of the very high performance of these units and the specialized test equipment required to adjust them properly, owners should not attempt to change frequency themselves.

If two or more systems are used at the same location, proper frequency selection is required to avoid interference. Frequency spacing is only one factor. Frequency mixing is another factor, involving not only the wireless frequencies, but also frequencies of other transmitters such as local TV stations. Many complex formulas must be used to determine frequencies resulting from a mix. Contact your dealer or Electro-Voice for frequency-selection assistance if you are planning to add more wireless systems to be run simultaneously at the same location.

DIVERSITY OPERATION

The GR-2000A receiver is a true dual-receiver space diversity design, which is the optimum technique for eliminating potential dropouts caused by reflected signals. A signal from the transmitter can reflect off surfaces such as air-conditioning ducts, equipment cabinets, and other metal objects, and arrive 180 degrees out of phase with the direct or other reflected signal, causing a "phase cancellation" of the entire signal. With a diversity system, such a phase-cancelling condition virtually never exists on more than one antenna at the same time. A true dual-receiver diversity system such as the GR-2000A is constantly switched to the antenna/receiver with the strongest signal, thus providing maximum reliability.

RECEIVER CONTROLS, CONNECTORS, AND INDICATORS

The GR-2000A diversity receiver is extremely easy to set up and operate. The only controls are a power ON switch, a MIC/LINE output level switch, and an adjustable output level control. Once an initial setup has been performed with these controls and front-panel indicators, the MIC/LINE switch and the output level control will probably not require resetting unless the system is used for a different application.

Front Panel:

"POWER" LED and Switch: Turns the receiver "on" and "off" and indicates when the power is active.

"AUDIO LEVEL" Display: Ten-segment LED bargraph-type display to indicate the peak audio input level to the receiver. The metering point is before the "MIC/LINE" switch and the output attenuator, so changes in these two controls will not affect the display reading.

"DIVERSITY CHANNEL" LED's: Indicate which receiver channel has been selected by the internal diversity circuitry. Proper diversity-circuit operation is indicated when these indicators switch back and forth (except at very short ranges, when one of the indicators locks on, due to strong-signal saturation of both channels.)

"RF SIGNAL" LED's: Indicate that the associated channel is receiving a signal from the transmitter. If one LED is "on" most of the time while the other is "off" far more than it is "on," a problem is indicated (such as a bad receiving antenna, poor antenna location, transmitter too close to one antenna, etc.).

Rear Panel:

"ANTENNA" Connectors: Type BNC for use with the whip antennas supplied.

"AUDIO" Output Connectors: (a) Standard, full-sized, three-pin male XLR for balanced audio output, switchable from low to high level; (b) 1/4-inch phone, line level output only.

"AUDIO ADJ" Control: Provides 30 dB of level control to the XLR and quarter-inch output connectors. This control works in conjunction with the MIC/LINE switch to provide a greater range of potential output level adjustment on the XLR connector.

"MIC/LINE" Output Level Switch: Selects low level ("mic" level) or high level output to the XLR connector. Depending on the setting of the AUDIO ADJ control, output is approximately -24 to -54 dBm in the MIC position and 0 dBm to -30 dBm in the LINE position at normal input levels.

**TRANSMITTER CONTROLS, CONNECTORS,
AND INDICATORS**

Cable Connector: TA3M miniature XLR (Tini Q-G), for cable to guitar.

Power Switch: Recessed; turns transmitter on and off.

Audio Switch: Mutes guitar audio

Audio Gain Control: Screwdriver adjust for transmitter preamplifier gain; approximately 12 dB of range.

ANTENNAS

The receiver antennas may be the most important components in a wireless system. However, antennas are the most often overlooked items in setting up a system, and are frequently the cause of quite unnecessary problems. Properly locating the receiving antennas is vitally important in any

wireless system. Whip antennas (as supplied with the GS-2000A) connected directly to the wireless receiver are adequate for many installations. When the distance between the receiver and the transmitter is 200 to 400 feet (60-120 m), or less, and the path between the receiver and the transmitter is a clear and unobstructed line-of-sight, good results usually can be obtained. However, other types of antennas may be needed for unusual applications, such as operating at extreme ranges of 500 feet (150 m) or more. TV antennas (with an appropriate matching transformer) are often used for this purpose. A "high-band" wide-bandwidth yagi antenna (Winegard K5-713, or similar) works well in this application. VHF communications antennas are also sometimes used for specialized requirements. However, such antennas are usually narrow-band and must be modified to function properly in the 169 to 186 MHz range.

NOTICE**CONVERSION FROM 115- TO 235-VOLT OPERATION**

**DO NOT ATTEMPT TO MAKE THIS CONVERSION WITH POWER APPLIED TO THE RECEIVER!
FULLY DISCONNECT THE AC POWER FROM BOTH THE RECEIVER AND THE AC OUTLET
BEFORE PROCEEDING**

To operate the GS-2000A system in countries using 220/240-volt ac supplies, you will need to convert the GR-2000A receiver. Use the following procedure for conversion.

- 1) Make sure the receiver is disconnected from the power source.
- 2) The switch to change from 115-volt (110V - 120V) to 235-volt (220V - 240V) operation is located on the right side of the receiver (front panel facing you). It is accessible through a small hole on the side.
- 3) Insert a small, flat-bladed screwdriver through the hole into the receiver. A two-position switch is located just inside the hole. Slide the switch toward the rear panel of the unit. The positions for 115-volt and 235-volt operation are stamped into the metal on either side of the hole.
- 4) Change the receiver fuse to the appropriate size. Use a 1/4-amp fuse for 235-volt operation and 1/2-amp fuse for 115-volt operation.
- 5) Caution: Make certain that the voltage selector is in the correct position. Operating the receiver on 235 volts when it is set for 115-volt operation may cause serious damage, especially if the fuse has not been changed to the 1/4-amp size.
- 6) Attach the receiver to the power source using an appropriate power cable.

SPECIFICATIONS

GS-2000A WIRELESS GUITAR SYSTEM**FREQUENCY RANGE** (Standard Frequencies)

169.505, 170.245, 171.045, 171.905, 178.225,
179.200, 184.025, 185.125.

WORKING RANGE

Up to 1,000 ft under ideal conditions; usually
somewhat less in typical applications.

EMISSION/MODULATION

Direct FM, crystal-controlled, 15-kHz deviation, 60F3

FREQUENCY RESPONSE

60 Hz to 14 kHz, ± 1.5 dB, 30 Hz to 16 kHz, ± 3 dB

HARMONIC DISTORTION

0.5% maximum, below transmitter limiting;
0.25% typical at 1 kHz

DYNAMIC RANGE

105 dB

ULTIMATE S/N (processed, 20-kHz bandwidth)

105 dB (flat) minimum (108 dB typical A-weighted)

AUDIO PROCESSOR

DNX™ 2:1 logarithmic compressor and expander

OPERATING TEMPERATURE

-20°C to +50°C (-4°F to +122°F)

FCC DATA

Approved under Parts 15, 74, and 90, as applicable

GS-1000 TRANSMITTER**POWER OUTPUT**

50 mW nominal

FREQUENCY STABILITY

$\pm 0.005\%$

SPURIOUS OUTPUT

-45 dB minimum, -55 dB typical

CONTROLS

Power on/off, audio on/off, level adjust

AUDIO ADJUSTMENT RANGE

12 dB

CABLE

2.5-ft with metal phone plug on instrument end and
miniature XLR on transmitter end

BATTERY LIFE

8-10 hours with one 9-V alkaline

DIMENSIONS

3.8 in. (9.7 cm) high, 2.8 in. (7.1 cm) wide, 1.0 in.
(2.5 cm) thick

WEIGHT

6 oz (170.1 g), with battery

GR-2000A DIVERSITY RECEIVER**RECEIVER TYPE**

Single-frequency, single-conversion,
superheterodyne FM

IMAGE REJECTION

80 dB, typical

SENSITIVITY

1.6 μ V for 50 dB S/N (processed), 20-kHz bandwidth

ULTIMATE QUIETING (S/N)

105 dB (20 kHz flat); 108 dB (A-weighted)

SQUELCH QUIETING

Greater than 105 dB (referenced to 15 kHz
deviation)

AUDIO OUTPUT,**LINE (High) LEVEL**

+12 to -18 dBm (at full deviation), +16 dBm
minimum at clipping

MIC (Low) LEVEL

-18 to -46 dBm at full deviation (-30 to -60 dBm
with normal headroom)

IF SELECTIVITY

200 kHz, 9 poles, monolithic ceramic and LC filters

RF SELECTIVITY

Approximately 5 MHz, 4-pole LC filter

ADJUSTMENTS AND CONTROLS

Power switch, low/high switch, output level adjust
control

INDICATORS

Audio-level bargraph, diversity A/B LEDs, RF-signal-
detect A/B LEDs, power ON/OFF LED

POWER

115 V ac, or 235 V ac (Internal switch selectable) 50/
60 Hz, 10 W

WEIGHT

6 lbs, 10 oz (3 kg)

DIMENSIONS (excluding rack-mount ears)

1.75 in (4.45 cm) high, 16.9 in (42.9 cm) wide,
9 in (23 cm) deep

RACK MOUNTING

The GR-2000A receiver may be mounted in a standard rack using the provided rack ears. Simply remove the two screws on both sides of the receiver adjacent to the front panel, put the rack ears in place, and screw them on. The receiver is one rack space high.

Placement of the antennas is often difficult when the receivers are in a rack. Several methods may be used for effective antenna reception. First, external dipole antennas may be purchased. These antennas typically consist of a length of cable, with a male BNC connector on one end and a small "box" with two opposing antennas on the other end. Dipole antennas allow the user to "remote" the antennas, placing them higher, away from interfering equipment or metal structures, and nearer the area where the transmitter will be used. It is not effective to simply make an "extension cable" and attach a whip antenna to the end; range will probably diminish.

Some people who use a single wireless unit in a rack will mount the receiver in the top space and then will cut small holes in the top of the rack case right above the connectors. They can then feed the whip antennas through the holes and attach them to the receiver, with most of the antenna length exposed and in the line of sight with the transmitter.

A one-rack-space antenna panel may be purchased or may be made from parts acquired from electronics or music dealers. The basic components of this device are a metal panel that is drilled (or preferably D-punched) to accommodate two female-to-female BNC bulkhead connectors (UG-492 type), and two short (1 to 2 feet) RG-58 cables with male BNC connectors on both ends. The bulkhead connectors should be in contact with the metal of the rack panel; scrape off the paint adjacent to the hole to make contact. Attach the BNC cables at one end to the receiver connectors and the other end to the interior side of the bulkhead connectors. Attach the whip antennas, provided with the GS-2000A system, to the exterior side of the bulkhead connectors. Place these antenna panels near the top of the rack. More than two of these devices in a rack may begin to interfere with each other.

When using multiple wireless systems together, a multicoupler can be useful. These devices allow up to four wireless receivers to be "fed" by a single set of antennas. Multicouplers are active devices, requiring power, and are available in both single-channel and dual-channel (diversity) versions. Two single-channel devices may be used together to function as a dual-channel multicoupler. Multicouplers reduce the number of receiving antennas, giving a "cleaner" look. However, without careful frequency selection, they can increase the chances for intermodulation interference between systems.

Placement of the wireless receiver in the rack is important in order to receive optimum performance and minimize the chances for interference. First and foremost, digital signal processing units act as broadband rf noise generators, radiating electromagnetic energy from the chassis and connectors (and often from attached unshielded cables). They will emit energy throughout the VHF band, and will typically have "spikes" that are much stronger than the average level.

The transmitting effect, when the receiver is close to the digital unit and the spike is on or near the receiver's frequency, is similar to having a wireless transmitter on at a distance of 50 to 100 feet from the receiver. In such circumstances, when the receiver is on and the wireless transmitter is off, you may notice both signal LED's flickering or lit, and sometimes one of the DIVERSITY CHANNEL LED's will also light and the AUDIO LEVEL meter will randomly "spike." If plugged into an amplification system, noise will be heard. Turning on the transmitter will override this interference.

It is always best to rack mount the wireless receiver separately, or with analog devices. If this placement is not possible, remoting the antennas, keeping the transmitter on whenever the receiver is on, and/or turning down the gain on the amplification system when the transmitter is not in use will alleviate the potential problems.

IN CASE OF DIFFICULTY

If you are having a problem with your wireless system, the following hints may be of help.

PROBLEM	POSSIBLE CAUSES	SOLUTIONS
No audio:	Transmitter audio switch is off.	Turn transmitter audio switch on.
	Disconnected cable at receiver.	Connect, repair, or replace cable.
	Transmitter power switch is off.	Turn transmitter power switch on, with level down on mixer/preamp/amplifier.
	Receiver is off.	Turn receiver on.
	No (or dead) battery in transmitter.	Insert a fresh alkaline battery into transmitter battery compartment (Duracell MN 1604 recommended).
	Faulty battery contacts in transmitter.	Clean contacts
	Gain down on mixing-board channel, mixing-board output, or power amp.	Check each component.
Low gain/ volume:	Receiver "MIC/LINE" Switch on "MIC" while in a mixer/preamp/amplifier line-level input.	Set "MIC/LINE" switch to "LINE."
	Gain not up sufficiently on mixer/preamp/amplifier input.	Increase mixer/preamp/amplifier gain.
	Receiver "AUDIO ADJ" control turned too far counterclockwise.	Increase receiver "AUDIO ADJ" control.
	Transmitter audio level control turned too far counterclockwise.	Turn up transmitter audio level control.
Distortion:	Transmitter audio level control too far clockwise, overloading transmitter circuit.	Turn transmitter audio level control down.
	"MIC/LINE" switch set on "LINE" while plugged into a mic-level input.	Set "MIC/LINE" switch to "MIC," or plug into line-level input.
	Receiver "AUDIO ADJ" control set too far clockwise, overloading the mixer/preamp/amplifier input.	Turn receiver "AUDIO ADJ" control down.
	Battery level low in transmitter.	Insert a fresh battery.
Signal interference:	Another wireless system in the immediate vicinity operating on the same frequency, or on a frequency that mixes with another transmitter (such as a TV broadcast transmitter) onto the wireless frequency.	If interference is weak, keep transmitter on to override interference whenever receiver is on (or "fade" audio on mixer/preamp/amplifier). If interference is strong, turn off all other wireless in area to find the one causing the problem.
	Strong electromagnetic field from stage lighting or other source near the transmitter or receiver, producing "RF noise" on or near the operating frequency of the wireless system.	Repair or remove source of interference.
Short range or frequent drop-outs:	Faulty receiving antenna system.	Reposition antennas, or replace with dipole antennas; check coaxial-cable connectors.
	Faulty transmitter antenna.	Return to factory or authorized service station.
	Battery level low in transmitter.	Insert a fresh battery.

SERVICE INFORMATION**Shipping Damage**

Inspect the shipping carton for possible damage. If damage is found, notify the transportation company immediately. Save the carton as evidence for the carrier to inspect. If damage occurs during shipping, it is the responsibility of the consignee to file a claim with the carrier. If the carton is in good condition but the equipment is damaged, call Electro-Voice.

Warning

The GS-2000A wireless guitar system is approved by the Federal Communications Commission. Tuning and other internal adjustments by other than FCC-licensed technicians may nullify the equipment's FCC approval and result in illegal operation.

Factory Service

If factory service is required, ship the unit prepaid in its original carton to:

Electro-Voice, Inc.
Wireless Operation
9900 Baldwin Place
El Monte, California 91731-2204

Enclose a note describing the problem along with any other helpful information such as where and how the unit is used.

WARRANTY (Limited) —

Electro-Voice products are guaranteed against malfunction due to defects in materials or workmanship for a specified period, as noted in the individual product-line statement(s) below, or in the individual product data sheet or owner's manual, beginning with the date of original purchase. If such malfunction occurs during the specified period, the product will be repaired or replaced (at our option) without charge. The product will be returned to the customer prepaid. **Exclusions and Limitations:** The Limited Warranty does not apply to: (a) exterior finish or appearance; (b) certain specific items described in

the individual product-line statement(s) below, or in the individual product data sheet or owner's manual; (c) malfunction resulting from use or operation of the product other than as specified in the product data sheet or owner's manual; (d) malfunction resulting from misuse or abuse of the product; or (e) malfunction occurring at any time after repairs have been made to the product by anyone other than Electro-Voice or any of its authorized service representatives. **Obtaining Warranty Service:** To obtain warranty service, a customer must deliver the product, prepaid, to Electro-Voice or any of its authorized service representatives together with proof of purchase of the product in the form of a bill of sale or receipted invoice. A list of authorized service representatives is available from Electro-Voice at 600 Cecil Street, Buchanan, MI 49107 (616/695-6831) and/or Electro-Voice West, at 8234 Doe Avenue, Visalia, CA 93291 (209/651-7777).

Incidental and Consequential Damages

Excluded: Product repair or replacement and return to the customer are the only remedies provided to the customer. Electro-Voice shall not be liable for any incidental or consequential damages including, without limitation, injury to persons or property or loss of use. Some states do not allow the exclusion or limitation of incidental or consequential damages so the above limitation or exclusion may not apply to you. **Other Rights:** This warranty gives you specific legal rights, and you may also have other rights which vary from state to state.

Electro-Voice Wireless Systems are guaranteed against malfunction due to defects in materials or workmanship for a period of one (1) year from the date of original purchase. The Limited Warranty does not extend to cables or cable connectors. Additional details are included in the Uniform Limited Warranty Statement.

Service and repair address for this product:

Electro-Voice, Inc.
Wireless Operation
9900 Baldwin Place
El Monte, CA 91731-2204

Specifications subject to change without notice.



600 Cecil Street, Buchanan, Michigan 49107, Phone (616)695-6831, Fax: 616-695-1304

8234 Doe Avenue, Visalia, California 93291, Phone (209)651-7777, Fax (209)651-0164

Mark IV Audio Canada, Inc., 345 Herbert St., Gananoque, Ontario, Canada K7G 2V1, Phone (613)382-2141, Fax (613)382-7466

Mark IV Audio, A.G., Keltenstrasse 5, CH-2563 IPSACH, Switzerland, Phone (011)41/32-51-68-33, Fax (011)41/325 11221

Mark IV Audio Japan, Ltd., 2-5-60 Izumi, Suginami-ku, Tokyo, Japan 168, Phone (011)81/3-3325-7900, Fax (011)81/3-3325-7878

Mark IV Vertriebs GmbH, Larchenstrasse 99, 6230 Frankfurt/Main 80, Germany, Phone (011)49/69-380-100, Fax (011)49-69-386-959

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Phone (011)61/2-648-3455, Fax (011)61/2-648-5585